

# PATENT ABSTRACTS OF JAPAN

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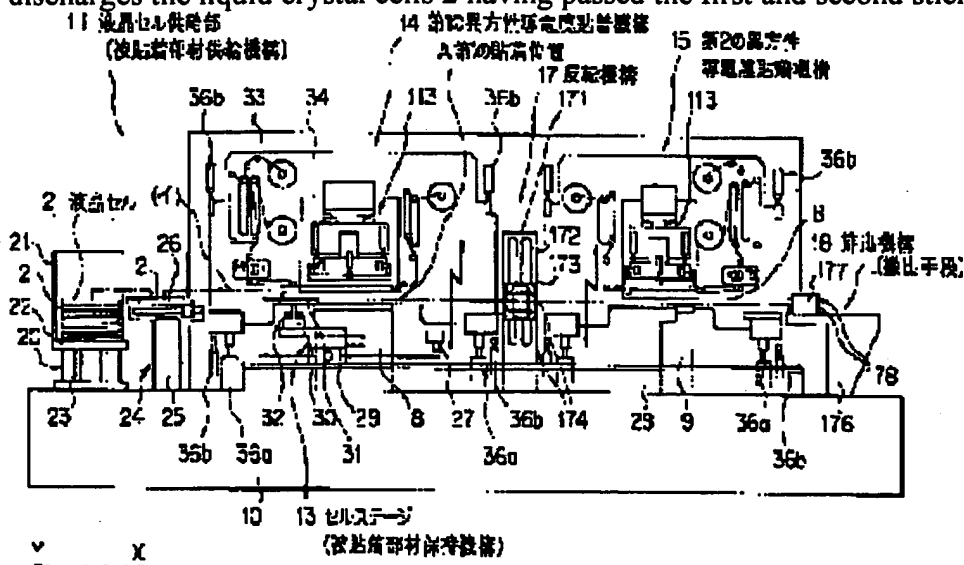
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## (54) DEVICE FOR STICKING ADHESIVE TAPE PIECE

### (57)Abstract:

PURPOSE: To provide a device which can perform the cutting, carriage, sticking, etc., of an adhesive tape favorably and accurately and besides full automatically in succession.

CONSTITUTION: This device is equipped with a liquid crystal cell feeder 11, which feeds liquid crystal cells 2, being provided on a base 10, a cell stage 13, which receives the liquid crystal cells 2 from this feeder 11 and carries and positions them in first and second sticking positions A and B, and first and second sticking mechanisms 14 and 15 which are juxtaposed on the base 10 and cut an anisotropic conductive film in the shape of a long tape so as to manufacture anisotropic conductive pieces and also, stick the anisotropic conductive pieces to each of the first and second liquid crystal glass boards constituting the liquid crystal cells 2 held on a cell stage 13. And, this is equipped with an inverting mechanism 17, which is arranged between first and second sticking mechanisms 14 and 15 to turn over the liquid crystal cells 2 having passed the first sticking mechanism 14, and a cell discharge mechanism 18, which discharges the liquid crystal cells 2 having passed the first and second sticking mechanisms 14.



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## CLAIMS

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### [Claim(s)]

[Claim 1] In the attachment equipment of the piece of an adhesive tape which manufactures the piece of an adhesive tape by cutting the adhesive tape which has tackiness to both sides by the shape of a long picture in the shape of a strip of paper, and sticks this piece of an adhesive tape on a stuck member The stuck member \*\*\*\*ed from the stuck member feeder style which \*\*\*\*s the above-mentioned stuck member, and this stuck member feeder style is received. the adhered member hold device in which the site on which the above-mentioned piece of an adhesive tape of this stuck member is stuck is positioned in a predetermined attachment position, and the above -- a long picture, while an adhesive tape is contained this adhesive tape was stuck in one field of this adhesive tape -- the same -- a long picture -- with the delivery device which it lets out one by one for every predetermined dimension in the status that it held by the tape-like release paper The cutting-machine style which leaves the above-mentioned release paper, cuts the adhesive tape which it let out from this delivery device for every above-mentioned predetermined dimension, and fabricates the piece of an adhesive tape, The guide device in which show the piece of an adhesive tape held at the above-mentioned release paper to the predetermined attachment position in guiding the above-mentioned release paper, and the adhesive face of this piece of an adhesive tape is made to counter the front face of the above-mentioned stuck member, The attachment device which pushes the adhesive face of the piece of an adhesive tape and the front face of the above-mentioned stuck member which countered in the above-mentioned attachment position, and sticks this adhesive tape on the above-mentioned stuck member, By the sublation device in which the above-mentioned release paper is exfoliated from the piece of an adhesive tape stuck on the above-mentioned stuck member, and sending and driving the release paper which exfoliated for every predetermined dimension A delivery drive means to make the adhesive face of the new piece of an adhesive tape which was fabricated by the above-mentioned cutting-machine style and held at this release paper counter the front face of the stuck member positioned in the above-mentioned predetermined attachment position, Attachment equipment of the piece of an adhesive tape characterized by providing an issue means to discharge the release paper which passed this delivery drive means one by one from the above-mentioned attachment position, and a taking-out means to transport this stuck member to a taking-out position based on the piece of an adhesive tape having been stuck on the above-mentioned stuck member.

[Claim 2] In the attachment equipment of the piece according to claim 1 of an adhesive tape the above-mentioned stuck member The inversion device in which are the substrate of the couple which opposite arrangement was mutually carried out and was joined, and one substrate of the substrates of this couple is made to invert this liquid crystal cell based on the above-mentioned piece of an adhesive tape having been stuck is provided. Attachment equipment of the piece of an adhesive tape characterized by sticking the above-mentioned piece of an adhesive tape on each of the field which counters mutually [ the substrate of the above-mentioned couple ].

[Claim 3] In the attachment equipment of the piece according to claim 1 of an adhesive tape the above-mentioned delivery device The supply reel which carries out the winding receipt of the release paper stuck on one [ an adhesive tape and / at least ] field of this adhesive tape, and this reel by carrying out a rotation drive While \*\*\*\*ing with the reel drive means which lets out the above-mentioned adhesive tape and a release paper, and the release paper stuck on one field of the above-mentioned adhesive tape The roller formed free [ a both-way move ] along the orientation which gives a tension to this release paper and an adhesive tape, An energization means to energize the above-mentioned roller in the orientation which gives a tension to the

above-mentioned adhesive tape and a release paper, and to locate this roller in the 1st position, If the above-mentioned roller resists and moves to the energization force of the above-mentioned energization means according to a detection means to detect the position of the above-mentioned roller, and the above-mentioned adhesive tape and a release paper being sent and it is located in the 2nd predetermined position While the above-mentioned reel drive means is operated according to the detecting signal from the above-mentioned detection means and it lets out an adhesive tape and a release paper from the above-mentioned reel Attachment equipment of the piece of an adhesive tape characterized by having a control means to stop a drive of the above-mentioned reel drive means based on the detecting signal from the above-mentioned detection means if the above-mentioned roller returns to the 1st position of a basis by letting out an adhesive tape and a release paper.

[Claim 4] It is the attachment equipment of the piece of an adhesive tape characterized by having the positioning guide which positions the piece of an adhesive tape which contacts the 1 side of the above-mentioned piece of an adhesive tape, and a release paper which meets crosswise at least, and was supplied to the above-mentioned attachment position whenever the above-mentioned piece of an adhesive tape sends the above-mentioned guide device for every predetermined dimension in the attachment equipment of the piece according to claim 1 of an adhesive tape and it drives.

[Claim 5] It is the attachment equipment of the piece of an adhesive tape carried out [ that the above-mentioned positioning guide is a guide idler which positions the piece of an adhesive tape supplied to the above-mentioned attachment position by having the strange guide slot where a width-of-face dimension is good in a periphery side, and narrowing width of face of this guide slot while it is arranged in the position which faced across the above-mentioned attachment position, respectively, and ] as the characteristic feature in the attachment equipment of the piece according to claim 4 of an adhesive tape.

[Claim 6] It is the attachment equipment of the piece of an adhesive tape characterized by being the contact field which the above-mentioned positioning guide is arranged in the above-mentioned attachment position in the attachment equipment of the piece according to claim 4 of an adhesive tape, drives in the orientation which \*\*\*\*s the cross direction 1 side of the piece of an adhesive tape supplied to this attachment position, and rectifies the posture of this piece of an adhesive tape.

[Claim 7] In the attachment equipment of the piece according to claim 1 of an adhesive tape the above-mentioned attachment device By driving the mobile which holds the above-mentioned delivery device, a cutting-machine style, a guide device, a sublation device, and a delivery drive means, and moves in one with these, and the above-mentioned mobile A drive means to contact the adhesive face of the above-mentioned piece of an adhesive tape to the above-mentioned stuck member, Attachment equipment of the piece of an adhesive tape characterized by providing the tool which pushes this piece of an adhesive tape against the above-mentioned stuck member by contacting the field which was established in the above-mentioned mobile and stuck on the above-mentioned release paper of the above-mentioned piece of an adhesive tape.

[Claim 8] In the attachment equipment of the piece according to claim 1 of an adhesive tape the above-mentioned attachment device The tool for insertion with which it equips where it carried out the adsorption hold of the field where the above-mentioned release paper of the above-mentioned piece of an adhesive tape was stuck and the above-mentioned piece of an adhesive tape is positioned to the above-mentioned stuck member, Attachment equipment of the piece of an adhesive tape characterized by providing the tool for sticking by pressure which pushes against the above-mentioned stuck member the piece of an adhesive tape with which the above-mentioned stuck member was equipped by the above-mentioned tool for insertion through the above-mentioned release paper, and is stuck to the above-mentioned stuck member by pressure.

[Claim 9] In the attachment equipment of the piece according to claim 1 of an adhesive tape the above-mentioned delivery drive means The clamp device which supports the site which exfoliated from the piece of an adhesive tape stuck on the stuck member of the above-mentioned

release paper, and is moved to a feed direction, Attachment equipment of the piece of an adhesive tape characterized by having the adsorption hold means which carries out the adsorption hold of the site holding the above-mentioned piece of an adhesive tape of the above-mentioned release paper when the above-mentioned release paper is not supported by the above-mentioned clamp device at least.

[Claim 10] In the attachment equipment of the piece according to claim 1 of an adhesive tape the above-mentioned issue means The roller formed in this release paper free [ a both-way move ] along the orientation which gives a tension while \*\*\*\*ing with the release paper which passed the above-mentioned delivery drive means, An energization means to energize this roller in the orientation which gives a tension to the above-mentioned release paper, and to locate this roller in the 1st position, the take-up reel which carries out the winding receipt of the above-mentioned release paper, and this reel by carrying out a rotation drive If the above-mentioned roller moves to this take-up reel according to the energization force of the above-mentioned energization means according to the reel drive means which rolls round the above-mentioned release paper, and the above-mentioned release paper being sent and it is located in the 2nd predetermined position While the above-mentioned reel drive means is operated according to the detecting signal from the above-mentioned detection means and a release paper is rolled round to the above-mentioned take-up reel Attachment equipment of the piece of an adhesive tape characterized by providing a control means to stop a drive of the above-mentioned reel drive means based on the detecting signal from the above-mentioned detection means if the above-mentioned roller returns to the 1st position of a basis by rolling round the above-mentioned release paper.

[Claim 11] In the attachment equipment of the piece according to claim 1 of an adhesive tape the above-mentioned disconnection means While holding free [ titubation of the plinth side holding the field on which the release paper of the above-mentioned adhesive tape was stuck, and the end side which meets crosswise / of the above-mentioned adhesive tape of this plinth ] While it meets crosswise [ of the 1st direct-acting device which can move in the thickness orientation of the above-mentioned adhesive tape, and the above-mentioned adhesive tape of the above-mentioned plinth ], and also holding free [ titubation of one end ] The 2nd direct-acting device which can move in the thickness orientation of the above-mentioned adhesive tape, and the disconnection blade which counters the adhesive face of the adhesive tape held at the above-mentioned plinth, is arranged, and possesses the length more than the width of face of the above-mentioned adhesive tape at least, Attachment equipment of the piece of an adhesive tape characterized by providing the actuator which drives this disconnection blade in the orientation of the adhesive tape held at the above-mentioned plinth, and a regulation means to regulate the feed per revolution of the above-mentioned disconnection blade by the above-mentioned actuator in the amount which can cut only the above-mentioned adhesive tape.

[Claim 12] The delivery roll which carries out the winding receipt of a pad and this pad, and lets them out one by one in the attachment equipment of the piece according to claim 7 of an adhesive tape, this delivery roll -- since -- with the winding roll which rolls round the pad which it let out one by one It is prepared in the above-mentioned tool free [ attachment and detachment ], hold this delivery roll and a winding roll, and the above-mentioned pad is stretched between the delivery roll of a parenthesis, and a winding roll. Attachment equipment of the piece of an adhesive tape characterized by providing the case where the pad by which set-up was carried out [ above-mentioned ] is located in the field which contacts the above-mentioned release paper of the above-mentioned tool when attached in the above-mentioned tool.

[Claim 13] Attachment equipment of the piece of an adhesive tape characterized by providing the drive which is formed in the above-mentioned tool side and carries out the rotation drive of the above-mentioned winding roll at least in the orientation which rolls round the above-mentioned pad in the attachment equipment of the piece according to claim 12 of an adhesive tape.

[Claim 14] In the attachment equipment of the piece according to claim 12 of an adhesive tape

the above-mentioned supply roll The medial-axis member by which both ends are supported by the above-mentioned case and the above-mentioned pad is wound around a periphery side, This medial-axis member is prepared in an end free [ the slide to shaft orientations ] at least, and it prepares in orientation free [ \*\*\*\* ] outside the above-mentioned case from this medial-axis member. \*\*\*\*\*, It stops with an energization means to energize this \*\*\*\*\* in \*\*\*\*\* or the orientation of rejection, and the pad which was prepared in this \*\*\*\*\* and wound around the above-mentioned medial-axis member. By it being arranged in the position which counters a regulation means to regulate \*\*\*\* of the above-mentioned \*\*\*\*\*, and the outside of the above-mentioned case, all the above-mentioned pads being delivered from the above-mentioned medial-axis member, and the stop status of this pad and a regulation means being canceled Attachment equipment of the piece of an adhesive tape characterized by providing the sensor which will detect that if the above-mentioned \*\*\*\*\* projects from the above-mentioned case or it is absorbed.

[Claim 15] In the position which counters the adhesive face of the piece of an adhesive tape held at the release paper in the attachment equipment of the piece according to claim 1 of an adhesive tape By carrying out the \*\*\*\* drive of the adhesion member which sticks with this piece of an adhesive tape, and this adhesion member to the unnecessary piece of an adhesive tape by it being prepared free [ this piece of an adhesive tape and \*\*\*\* ], and touching the adhesive face of the above-mentioned piece of an adhesive tape Attachment equipment of the piece of an adhesive tape characterized by providing the drive which exfoliates and removes the unnecessary piece of an adhesive tape from the above-mentioned release paper.

## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the attachment equipment of the piece of an adhesive tape which sticks on the above-mentioned liquid crystal glass substrate the piece (piece of an adhesive tape) of an anisotropy electric conduction layer of double-sided tackiness which is connection material, in order to connect IC for a liquid crystal drive which are TAB parts to the liquid crystal glass substrate of the couple in which a liquid crystal cell carries out mutual opposite.

[0002]

[Description of the Prior Art] For example, in the manufacturing process of a liquid crystal panel, there is a process which mounts IC for a liquid crystal drive in the liquid crystal glass substrate which constitutes a liquid crystal cell.

[0003] Conventionally, connection between this glass substrate and IC for a liquid crystal drive was made using the rubber connector etc. However, there are small [ of a liquid crystal panel in recent years ], a request of lightweight-izing, and a request of back light installation, and the limitation came for connection by the above-mentioned rubber connector etc.

[0004] Then, recently, TAB (Tape Automated Bonding) parts which come to carry out inner lead bonding of the semiconductor device to the tape carrier package of the shape of a thin cinema film film which comes to form a circuit pattern in a front face as an IC for a liquid crystal drive are used widely.

[0005] This TAB part is parts which are shown in drawing 26 by 1, and each TAB part 1 is mounted in the periphery of the 1st of the couple which constitutes a liquid crystal cell 2, and the 2nd liquid crystal glass substrate 2a and 2b. And as for the connection with the circuit pattern formed in this TAB part 1, and the above 1st and the 2nd liquid crystal glass substrate 2a and 2b, an anisotropy electric conduction layer (anisotropy electric conduction adhesives) is used.

[0006] This anisotropy electric conduction layer is the member of the shape of a tape which is shown in drawing 27 by 4, and consists of an anisotropy electrical conducting material which made electric conduction grain mix into a thermosetting or thermoplastic resin film.

[0007] This anisotropy electric conduction layer 4 The outer lead of the TAB parts 1, the above 1st, or 2nd glass-substrate 2a, If it presses in the orientation which insert between the wiring terminals of 2b and the above-mentioned TAB parts 1, the above 1st, or the 2nd glass substrate 2a and 2b is made to counter mutually Since it has conductivity only in the orientation in which the electric conduction grain in this anisotropy electric conduction layer 4 contacted mutually, and they were inserted and crowded, only the outer lead of the above-mentioned TAB parts 1 which counter mutually, the above 1st, or the wiring terminal of the 2nd glass substrate 2a and 2b is connected electrically.

[0008] By the way, when connecting the above-mentioned TAB parts 1 and the 1st and 2nd liquid crystal glass substrate 2a and 2b using this anisotropy electric conduction layer 4, it is necessary to stick the above-mentioned anisotropy electric conduction layer 4 on either the above-mentioned TAB parts 1 or the liquid crystal glass substrates 2a and 2b beforehand.

[0009] Among these, as shown in drawing 27 , the case where the above-mentioned anisotropy electric conduction layer 4 is beforehand stuck on the direction of the above-mentioned liquid crystal glass substrate (here 2nd liquid crystal glass-substrate 2a) is explained.

[0010] Much wiring terminal 5 -- for connecting the above-mentioned TAB parts 1 is drawn by the pars marginalis of this liquid crystal glass-substrate 2b. the above-mentioned anisotropy electric conduction layer 4 -- a long picture -- since it is a tape-like member, it cuts to piece of anisotropy electric conduction layer 4' of a request length, and is stuck on this above-mentioned wiring terminal 5 --

[0011] Moreover, when manufacturing the simple matrix liquid crystal panel 2 shown in drawing 26 , it is necessary to mount above-mentioned TAB parts 1 -- in the field which counters

mutually [ the 1st of the couple which counters mutually, and the 2nd liquid crystal glass 2a and 2b ], respectively. For this reason, above-mentioned piece of anisotropy electric conduction layer 4' is stuck on the field which counters mutually [ the above 1st and the 2nd liquid crystal glass substrate 2a and 2b ], respectively.

[0012] In addition, since this anisotropy electric conduction layer 4 (piece of anisotropy electric conduction layer 4') is the member of the shape of a double-sided tape which has tackiness at both a front face and the rear face, in order that it may prevent adhesion of dust etc., as shown in drawing 28, release papers 6a and 6b (masking tape) are stuck on the both sides in many cases.

[0013] Therefore, in sticking the anisotropy electric conduction layer 4 on the above-mentioned glass-substrate 2b (2a), in case it connects the above-mentioned TAB parts 1 to liquid crystal glass-substrate 2b on which only release-paper 6b of the side which counters this glass-substrate 2b is removed first, and this anisotropy electric conduction layer 4 was stuck, it is necessary to remove release-paper 6a which while will accept [ above-mentioned ] it anisotropy electric conduction layer 4, and was stuck before it in the field.

[0014] After the above-mentioned liquid crystal cell 2 passes through such a last process, it is supplied to the package equipment (not shown) which mounts the above-mentioned TAB parts 1. And after making the fraction of the outer lead of the above-mentioned TAB parts 1 counter the wiring terminal 5 stuck on the above-mentioned anisotropy electric conduction layer 4 of the above 1st and the 2nd liquid crystal glass substrate 2a and 2b, this package equipment is pushed to the above-mentioned liquid crystal glass substrates 2a and 2b using \*\*\*\*\*-\*\*, is heating and mounts this TAB part 1 in this liquid crystal cell one by one.

[0015] The simple matrix liquid crystal panel of one sheet will be completed by passing through such a process.

[0016]

[Problem(s) to be Solved by the Invention] By the way, increasingly, it has miniaturized and circuit patterns, such as wiring terminal 5 -- formed in the above-mentioned liquid crystal glass substrates 2a and 2b according to the request of thin-shape-izing of liquid crystal equipment in recent years and a miniaturization, have also high-density-ized the above-mentioned TAB parts 1 while they are increasingly made detailed.

[0017] Since the width of face of the anisotropy electric conduction layer 4 stuck on the above-mentioned liquid crystal glass substrates 2a and 2b is in the inclination which becomes still thinner and electric conduction grain mixed is also made detailed in connection with this, the handling takes prudence.

[0018] Moreover, since it corresponds to detailed-ization of the above-mentioned wiring terminal 5 or the above-mentioned TAB parts 1, although there is the need of sticking more the above-mentioned anisotropy electric conduction layer 4 on high degree of accuracy, since this anisotropy electric conduction layer 4 is easy to be extended when the width of face of the above-mentioned anisotropy electric conduction layer 4 becomes thin, it is easy to produce slack etc. and a positioning is also difficult.

[0019] Furthermore, it may be said that the work which cuts the anisotropy electric conduction layer 4 and fabricates piece of anisotropy electric conduction layer 4', sublation of release papers 6a and 6b, etc. require technique complicated since this anisotropy electric conduction layer 4 is the member of double-sided tackiness, and special.

[0020] For this reason, it might be said that the work which sticks the above-mentioned anisotropy electric conduction layer 4 on the above-mentioned liquid crystal cell 2 was performed with a help, or manual equipment was performing it conventionally.

[0021] However, when based on a help or manual equipment, while a limitation is to raise the manufacturability of a liquid crystal panel, since dust etc. adheres to the above-mentioned anisotropy electric conduction layer 4 in many cases, there is a problem are not desirable.

[0022] It aims at offering the attachment equipment of the piece of an adhesive tape which this invention was able to be accomplished in view of such a situation, and can perform disconnection of the adhesive tapes of double-sided tackiness, such as an anisotropy electric

conduction layer, conveyance, attachment, etc. with the fitness and a sufficient precision, and can perform these work automatically and continuously.

[0023]

[Means for Solving the Problem] In the attachment equipment of the piece of an adhesive tape which manufactures the piece of an adhesive tape by the 1st means of this invention cutting the adhesive tape which has tackiness to both sides by the shape of a long picture in the shape of a strip of paper, and sticks this piece of an adhesive tape on a stuck member The stuck member \*\*\*\*ed from the stuck member feeder style which \*\*\*\*s the above-mentioned stuck member, and this stuck member feeder style is received. the adhered member hold device in which the site on which the above-mentioned piece of an adhesive tape of this stuck member is stuck is positioned in a predetermined attachment position, and the above -- a long picture, while an adhesive tape is contained this adhesive tape was stuck in one field of this adhesive tape -- the same -- a long picture -- with the delivery device which it lets out one by one for every predetermined dimension in the status that it held by the tape-like release paper The cutting-machine style which leaves the above-mentioned release paper, cuts the adhesive tape which it let out from this delivery device for every above-mentioned predetermined dimension, and fabricates the piece of an adhesive tape, The guide device in which show the piece of an adhesive tape held at the above-mentioned release paper to the predetermined attachment position in guiding the above-mentioned release paper, and the adhesive face of this piece of an adhesive tape is made to counter the front face of the above-mentioned stuck member, The attachment device which pushes the adhesive face of the piece of an adhesive tape and the front face of the above-mentioned stuck member which countered in the above-mentioned attachment position, and sticks this adhesive tape on the above-mentioned stuck member, By the sublation device in which the above-mentioned release paper is exfoliated from the piece of an adhesive tape stuck on the above-mentioned stuck member, and sending and driving the release paper which exfoliated for every predetermined dimension A delivery drive means to make the adhesive face of the new piece of an adhesive tape which was fabricated by the above-mentioned cutting-machine style and held at this release paper counter the front face of the stuck member positioned in the above-mentioned predetermined attachment position, It is characterized by providing an issue means to discharge the release paper which passed this delivery drive means one by one from the above-mentioned attachment position, and a taking-out means to transport this stuck member to a taking-out position based on the piece of an adhesive tape having been stuck on the above-mentioned stuck member.

[0024] The 2nd means is set to the attachment equipment of the piece of an adhesive tape of the 1st above-mentioned means. the above-mentioned stuck member The inversion device in which are the substrate of the couple which opposite arrangement was mutually carried out and was joined, and one substrate of the substrates of this couple is made to invert this liquid crystal cell based on the above-mentioned piece of an adhesive tape having been stuck is provided. It is characterized by sticking the above-mentioned piece of an adhesive tape on each of the field which counters mutually [ the substrate of the above-mentioned couple ].

[0025] The 3rd means is set to the attachment equipment of the piece of an anisotropy electric conduction layer of the 1st means. the above-mentioned delivery device The supply reel which carries out the winding receipt of the release paper stuck on one [ at least ] field of an anisotropy electric conduction layer and this anisotropy electric conduction layer, and this supply reel by carrying out a rotation drive While \*\*\*\*ing with the reel drive means which lets out the above-mentioned anisotropy electric conduction layer and a release paper, and the release paper stuck on one field of the above-mentioned anisotropy electric conduction layer The roller formed free [ a both-way move ] along the orientation which gives a tension to this release paper and an anisotropy electric conduction layer, An energization means to energize the above-mentioned roller in the orientation which gives a tension to the above-mentioned anisotropy electric conduction layer and a release paper, and to locate this roller in the 1st position, If the above-mentioned roller resists and moves to the energization force of the above-mentioned energization



means according to a detection means to detect the position of the above-mentioned roller, and the above-mentioned anisotropy electric conduction layer and a release paper being sent and it is located in the 2nd predetermined position While the above-mentioned reel drive means is operated according to the detecting signal from the above-mentioned detection means and it lets out an anisotropy electric conduction layer and a release paper from the above-mentioned supply reel If the above-mentioned roller returns to the 1st position of a basis by letting out an anisotropy electric conduction layer and a release paper, it will be characterized by having a control means to stop a drive of the above-mentioned reel drive means based on the detecting signal from the above-mentioned detection means.

[0026] It carries out that the 4th means has the positioning guide which positions the anisotropy electric-conduction layer which contacts the 1 side of the above-mentioned piece of an anisotropy electric conduction layer, and a release paper which meets crosswise at least, and was supplied to the above-mentioned attachment position whenever the above-mentioned piece of an anisotropy electric conduction layer sends and drives the above-mentioned guide device for every predetermined dimension in the attachment equipment of the piece of an anisotropy electric conduction layer of the 1st means as the characteristic feature.

[0027] It carries out that the 5th means is the guide idler positioned in the piece of an anisotropy electric-conduction layer supplied to the above-mentioned attachment position by having the strange guide slot where a width-of-face dimension is good in a periphery side, and narrowing width of face of this guide slot while the above-mentioned positioning guide is arranged in the position which faced across the above-mentioned attachment position in the attachment equipment of the piece of an anisotropy electric-conduction layer of the 4th means, respectively as the characteristic feature.

[0028] In the attachment equipment of the piece of an anisotropy electric conduction layer of the 4th means, the above-mentioned positioning guide is arranged in the above-mentioned attachment position, the 6th means is driven in the orientation which \*\*\*\*s the cross direction 1 side of the piece of an anisotropy electric conduction layer supplied to this attachment position, and it is characterized by being the contact field which rectifies the posture of this piece of an anisotropy electric conduction layer.

[0029] The 7th means is set to the attachment equipment of the piece of an anisotropy electric conduction layer of the 1st means. the above-mentioned attachment device By driving the mobile which holds the above-mentioned delivery device, a cutting-machine style, a guide device, a sublation device, and a delivery drive means, and moves in one with these, and the above-mentioned mobile It is characterized by providing a drive means to contact the adhesive face of the above-mentioned piece of an anisotropy electric conduction layer to the above-mentioned substrate, and the tool which pushes this piece of an anisotropy electric conduction layer against the above-mentioned substrate by contacting the field which was established in the above-mentioned mobile and stuck on the above-mentioned release paper of the above-mentioned piece of an anisotropy electric conduction layer.

[0030] The means of the octavus is set to the attachment equipment of the piece of an anisotropy electric conduction layer of the 1st means. the above-mentioned attachment device The tool for insertion with which it equips where it carried out the adsorption hold of the field where the above-mentioned release paper of the above-mentioned piece of an anisotropy electric conduction layer was stuck and the above-mentioned piece of an anisotropy electric conduction layer is positioned to the above-mentioned substrate, The piece of an anisotropy electric conduction layer with which the above-mentioned substrate was equipped by the above-mentioned tool for insertion is pushed against the above-mentioned substrate through the above-mentioned release paper, and it is characterized by providing the tool for sticking by pressure stuck to the above-mentioned substrate by pressure.

[0031] The 9th means is set to the attachment equipment of the piece of an anisotropy electric conduction layer of the 1st means. the above-mentioned delivery drive means The clamp device which supports the site which exfoliated from the piece of an anisotropy electric conduction

layer stuck on the substrate of the above-mentioned release paper, and is moved to a feed direction, It is characterized by having the adsorption hold means which carries out the adsorption hold of the site holding the above-mentioned piece of an anisotropy electric conduction layer of the above-mentioned release paper when the above-mentioned release paper is not supported by the above-mentioned clamp device at least.

[0032] The 10th means is set to the attachment equipment of the piece of an anisotropy electric conduction layer of the 1st means. the above-mentioned issue means The roller formed in this release paper free [ a both-way move ] along the orientation which gives a tension while \*\*\*\*ing with the release paper which passed the above-mentioned delivery drive means, An energization means to energize this roller in the orientation which gives a tension to the above-mentioned release paper, and to locate this roller in the 1st position, the take-up reel which carries out the winding receipt of the above-mentioned release paper, and this take-up reel by carrying out a rotation drive If the above-mentioned roller moves to this take-up reel according to the energization force of the above-mentioned energization means according to the reel drive means which rolls round the above-mentioned release paper, and the above-mentioned release paper being sent and it is located in the 2nd predetermined position While the above-mentioned reel drive means is operated according to the detecting signal from the above-mentioned detection means and a release paper is rolled round to the above-mentioned take-up reel If the above-mentioned roller returns to the 1st position of a basis by rolling round the above-mentioned release paper, it will be characterized by providing a control means to stop a drive of the above-mentioned reel drive means based on the detecting signal from the above-mentioned detection means.

[0033] The 11th means is set to the attachment equipment of the piece given in one of an anisotropy electric conduction layer of the 1st means. the above-mentioned disconnection means While holding free [ titubation of the plinth side holding the field on which the release paper of the above-mentioned anisotropy electric conduction layer was stuck, and the end side which meets crosswise / of the above-mentioned anisotropy electric conduction layer of this plinth ] While it meets crosswise [ of the 1st direct-acting device which can move in the thickness orientation of the above-mentioned anisotropy electric conduction layer, and the above-mentioned anisotropy electric conduction layer of the above-mentioned plinth ], and also holding free [ titubation of one end ] The 2nd direct-acting device which can move in the thickness orientation of the above-mentioned anisotropy electric conduction layer, and the disconnection blade which counters the adhesive face of the anisotropy electric conduction layer held at the above-mentioned plinth, is arranged, and possesses the length more than the width of face of the above-mentioned anisotropy electric conduction layer at least, It is characterized by providing the actuator which drives this disconnection blade in the orientation of the anisotropy electric conduction layer held at the above-mentioned plinth, and a regulation means to regulate the feed per revolution of the above-mentioned disconnection blade by the above-mentioned actuator in the amount which can cut only the above-mentioned anisotropy electric conduction layer.

[0034] The 12th means is set to the attachment equipment of the piece of an anisotropy electric conduction layer of the 7th means. A pad, the supply roll which carries out the winding receipt of this pad, and delivers it one by one, and the winding roll which rolls round the pad delivered by this supply roll, It is prepared in the above-mentioned tool free [ attachment and detachment ], hold this supply roll and a winding roll, and the above-mentioned pad is stretched between the supply roll of a parenthesis, and a winding roll. When attached in the above-mentioned tool, it is characterized by providing the case where the pad by which set-up was carried out [ above-mentioned ] is located in the field which contacts the above-mentioned release paper of the above-mentioned tool.

[0035] The 13th means is prepared in the above-mentioned tool side in the attachment equipment of the piece of an anisotropy electric conduction layer of the 12th means, and it is characterized by providing the drive which drives the above-mentioned winding roll in the rolling-up orientation of the above-mentioned pad at least.

[0036] The 14th means is set to the attachment equipment of the anisotropy electric conduction layer of the 12th means. the above-mentioned supply roll The medial-axis member by which both ends are supported by the above-mentioned case and the above-mentioned pad is wound around a periphery side, This medial-axis member is prepared in an end free [ the slide to shaft orientations ] at least, and it prepares in orientation free [ \*\*\*\* ] outside the above-mentioned case from this medial-axis member. \*\*\*\*\*, It stops with an energization means to energize this \*\*\*\*\* in \*\*\*\*\* or the orientation of rejection, and the pad which was prepared in this \*\*\*\*\* and wound around the above-mentioned medial-axis member. By it being arranged in the position which counters a regulation means to regulate \*\*\*\* of the above-mentioned \*\*\*\*\*, and the outside of the above-mentioned case, all the above-mentioned pads being delivered from the above-mentioned medial-axis member, and the stop status of this pad and a regulation means being canceled If the above-mentioned \*\*\*\*\* projects from the above-mentioned case or it is absorbed, it will be characterized by providing the sensor which detects that.

[0037] The 15th means is set to the attachment equipment of the piece of an anisotropy electric conduction layer of the 1st means. The adhesion member which sticks with this piece of an anisotropy electric conduction layer by it being prepared in the position which counters the adhesive face of the piece of an anisotropy electric conduction layer held at the release paper free [ this piece of an anisotropy electric conduction layer and \*\*\*\* ], and touching the adhesive face of the above-mentioned piece of an anisotropy electric conduction layer, It is characterized by providing the drive which exfoliates and removes the unnecessary piece of an anisotropy electric conduction layer from the above-mentioned release paper by carrying out the \*\*\*\* drive of this adhesion member to the unnecessary piece of an anisotropy electric conduction layer.

[0038]

[Function] the work which sticks the piece of an adhesive tape on an adhered member according to the 1st means -- a long picture -- it is possible for it to be continuous and full automatic and to perform a release paper including the exfoliating work, from the piece of an adhesive tape stuck on the work and above-mentioned stuck member which cuts an adhesive tape for every predetermined dimension, and forms the piece of an adhesive tape

[0039] the work which the opposite side of the stuck member of the couple which is an adhered member is alike, respectively, and sticks the piece of an adhesive tape according to the 2nd means -- a long picture -- it is possible to carry out by being continuous and full automatic including the work which reverses the work which cuts an adhesive tape for every predetermined dimension, and forms the piece of an adhesive tape, the work which exfoliates a release paper from the piece of an adhesive tape stuck on the above-mentioned stuck member, and the above-mentioned stuck

[0040] According to the 3rd means, while an adhesive tape and a release paper can always be stretched by the fixed tension, it is possible to let out this adhesive tape and release paper one by one, where the tension of the above-mentioned regularity is maintained.

[0041] According to the 4th means, the piece of an adhesive tape stuck on a stuck member can be positioned to the above-mentioned stuck member.

[0042] While this piece of an adhesive tape could be guided in the guide slot at the time of delivery of an adhesive tape, when delivery is stopped according to the 5th means, the above-mentioned adhesive tape and a release paper can be held in the above-mentioned guide slot, and the positioning hold of the piece of an adhesive tape supplied to the above-mentioned attachment position can be carried out to the above-mentioned stuck member.

[0043] According to the 6th means, by making the piece of contact contact the cross direction 1 side of the above-mentioned adhesive tape, the posture of the piece of an adhesive tape located in an attachment position can be rectified, and this piece of an adhesive tape can be positioned to a stuck member.

[0044] While the adhesive face of the piece of an adhesive tape is contacted to a stuck member by moving the above-mentioned mobile according to the 7th means, the above-mentioned piece of an adhesive tape can be pushed against a stuck member by making a tool contact the field

where the release paper of this piece of an adhesive tape was stuck.

[0045] According to the means of the octavus, after carrying out the positioning insertion of the piece of an adhesive tape at a stuck member using the tool for insertion, this piece of an adhesive tape can be stuck to a stuck member by pressure using the tool for sticking by pressure.

[0046] It is possible to send the above-mentioned adhesive tape a predetermined dimension every, and to drive it by making it move to a feed direction, supporting the above-mentioned release paper by an adsorption hold and clamp device of the above-mentioned release paper by the adsorption hold means by turns, and supporting the above-mentioned release paper according to this drawer device according to the 9th means.

[0047] According to the 10th means, while a fixed tension can always be given to the above-mentioned release paper, where this tension is maintained, it sends a predetermined dimension every, drives, and can discharge one by one from the above-mentioned attachment position.

[0048] According to the 11th means, the inclination of the plinth holding an adhesive tape and the path clearance of this plinth and a disconnection blade can be adjusted, it can leave a release paper and the above-mentioned adhesive tape can be cut.

[0049] According to the 12th means, while a pad can be supplied between the press side of the above-mentioned press tool, and a release paper one by one, it can perform easily exchanging the above-mentioned pad by carrying out the desorption of the case.

[0050] According to the 13th means, it is possible to supply a new pad to the press side of the above-mentioned tool one by one by operating a drive intermittently.

[0051] According to the 14th means, it is detectable that all pads were delivered by the sensor with \*\*\*\*\* of \*\*\*\*\* , or a rejection operation.

[0052] According to the 15th means, before sending the piece of an adhesive tape to an attachment position, it exfoliates and the unnecessary piece of an adhesive tape held by the above-mentioned release paper can be removed from this release paper.

[0053]

[Example] Hereafter, one example of this invention is explained with reference to a drawing. In addition, the same sign is given to the component explained by the term of a prior art, and the same component, and the explanation is omitted.

[0054] Drawing 1 is the general drawing of the attachment equipment (henceforth "equipment") of the piece of an anisotropy electric conduction layer which is the attachment equipment of the piece of an adhesive tape of this invention.

[0055] This equipment is equipment which sticks on this liquid crystal cell the piece (adhesive tape) of an anisotropy electric conduction layer which is the junction material of this liquid crystal cell and the above-mentioned TAB parts as a last process which mounts TAB parts which are ICs for a liquid crystal drive in a liquid crystal cell.

[0056] The above-mentioned liquid crystal cell makes the 1st and the 2nd glass substrate 2a and 2b (stuck member) in which the transparent electrode not to illustrate and the orientation layer were formed counter mutually, consists a predetermined opening and makes these come to rival, as shown to drawing 26 in 2. TAB parts 1 -- from which a modality and a size are different, respectively mounts in the above 1st and the 2nd glass substrate 2a and 2b.

[0057] Therefore, this equipment is X1 and X2 to drawing of glass-substrate 2a of the above 1st, as shown in drawing 29 (a) and (b). It is Y1 to drawing of glass-substrate 2b of the 1st shown and 2nd X sides and the above 2nd. Above-mentioned piece of anisotropy electric conduction layer 4' is stuck on each of Y sides which is shown.

[0058] In addition, this 1st [ the ] and the + mark for a positioning 7 used for a positioning of the 2nd glass substrate 2a and 2b are formed in the both ends of X sides each (X1 and X2) and Y sides (Y1) of the above 1st and the 2nd liquid crystal glass substrate 2a and 2b, respectively.

[0059] Hereafter, the concrete configuration of this equipment is explained.

[0060] Ten in drawing 1 is the pedestal of this equipment. While the liquid crystal cell 2 supplied on this pedestal 10 with the liquid crystal cell feed zone 11 (anisotropy electric conduction layer feeder style) which supplies the above-mentioned liquid crystal cell 2 is received It conveys in

the height which shows this liquid crystal cell 2 in drawing by alternate long and short dash line (\*\*), and the cell stage 13 (stuck member hold device) positioned one by one is formed on the 1st shown in drawing by A and B, the 1st which were prepared in the 2nd anisotropy electric conduction layer attachment position, the 2nd backup 8, and 9.

[0061] Moreover, the 1st piece attachment device 14 (attachment device) of an anisotropy electric conduction layer which sticks above-mentioned piece of anisotropy electric conduction layer 4' on 1st liquid crystal glass-substrate 2a (substrate) of the liquid crystal cell 2 positioned on the above-mentioned pedestal 10 at the above-mentioned 1st backup 8 top, The 2nd piece attachment device 15 (attachment device) of an anisotropy electric conduction layer which sticks above-mentioned piece of anisotropy electric conduction layer 4' on 2nd liquid crystal glass-substrate 2b of the liquid crystal cell 2 positioned on the 2nd above-mentioned backup 9 is arranged in parallel.

[0062] Furthermore, on the pedestal 10 between the above 1st and the 2nd piece attachment device 14 and 15 of an anisotropy electric conduction layer, in order to stick above-mentioned piece of anisotropy electric conduction layer 4' on each of the opposite side of the above 1st and the 2nd liquid crystal glass substrate 2a and 2b in each devices 14 and 15, the inversion device 17 in which the above-mentioned liquid crystal cell 2 is turned over is established.

[0063] Moreover, the liquid crystal cell 2 with which attachment of piece of anisotropy electric conduction layer 4' was able to be managed is received in the side of the piece layer attachment device 15 of anisotropy electric conduction of the above 2nd from the above-mentioned cell stage 13, and the cell issue device 18 (taking-out means) which discharges this liquid crystal cell 2 is formed in it.

[0064] Hereafter, these configurations are explained still in detail.

[0065] First, the liquid crystal cell feed zone 11 is explained.

[0066] As shown in drawing 1, the above-mentioned liquid crystal cell feed zone 11 possesses the elevator style 20. This elevator style 20 consists of a hold table 22 holding the magazine 21 which contains the above-mentioned liquid crystal cell 2 on the top where two or more sheets laminating is carried out, and a Z mechanical component 23 which positions each above-mentioned liquid crystal cell 2 in a predetermined height by carrying out the vertical drive of this hold table 22.

[0067] Moreover, this liquid crystal cell feed zone 11 possesses the cell tripper style 24 for taking out a liquid crystal cell 2 from the above-mentioned magazine 21. This cell tripper style 24 possesses the ejection arm 26 by which a both-way drive is carried out in the orientation of X in the upper-limit section of the supporter 25 set up on the above-mentioned pedestal 10, and this supporter 25.

[0068] Although it does not illustrate while the magazine 21 held at the above-mentioned elevator style 20 is countered, the point of this ejection arm 26 is formed in the shape of [ of abbreviation \*\* ] a character so that the above-mentioned liquid crystal cell 2 can be held on the top.

[0069] Therefore, this cell tripper style 24 can take out a liquid crystal cell 2 from the inside of this magazine 21 by inserting the point of the above-mentioned ejection arm 26 into the above-mentioned magazine 21, and can transport now this liquid crystal cell 2 in the orientation of the above-mentioned cell stage 13.

[0070] Next, the cell stage 13 is explained.

[0071] The X guide rail 28 which this cell stage 13 covers the orientation overall length of X of this pedestal 10 on the above-mentioned pedestal 10, and was prepared, X-Y table 29 prepared free [ X directional movement ] on this X guide rail 28, While it is set up on this X-Y table 29, and is prepared in the XY orientation at the theta table 30 by which a positioning drive is carried out, and this theta table 30 and a positioning drive is carried out in the orientation of theta, it becomes a top from the adsorption arm 31 of the X character configuration (not shown) which can carry out the adsorption hold of the above-mentioned liquid crystal cell 2.

[0072] Moreover, it is prepared in the above-mentioned theta table 30 free [ \*\*\*\* ] from the top

of this theta table, and at least three lift pins (two are illustrated to drawing) 32 which can hold a liquid crystal cell 2 from the top of the above-mentioned adsorption arm 31 by the upper limit are formed in it by projecting.

[0073] When the above-mentioned cell tripper style 24 delivers the above-mentioned liquid crystal cell 2 on the above-mentioned adsorption arm 31 of this cell stage 13, the adsorption arm 31 of the above-mentioned cell stage 13 is first moved in the orientation of the above-mentioned cell tripper style 24. Subsequently, the above-mentioned ejection arm 26 is driven in the orientation which retreats from the above-mentioned magazine 21, and the liquid crystal cell 2 taken out by this ejection arm 26 is positioned to the upper part of the above-mentioned adsorption arm 31.

[0074] Subsequently, the above-mentioned cell stage 13 is raising the above-mentioned lift pin 32 from the top of the above-mentioned theta stage, and raises the above-mentioned liquid crystal cell 2 from the top of the above-mentioned supply arm 26.

[0075] And after moving the above-mentioned ejection arm 26 in the orientation of the above-mentioned magazine 21 again from this cell stage 13, the above-mentioned lift pin 32 is contained in the above-mentioned theta table 30.

[0076] By this, the above-mentioned liquid crystal cell 2 is delivered to the top of the adsorption arm 31 of the above-mentioned X character configuration, and an adsorption hold is carried out by the adsorption section (not shown) which carried out opening to the point of the adsorption arm 31 of the shape of this X character.

[0077] This cell stage 13 is conveyed in the height which shows in drawing the liquid crystal cell 2 held on the above-mentioned adsorption arm 31 by driving above-mentioned X-Y table 29 along with the above-mentioned X guide rail 28 by alternate long and short dash line (b), and the position which counters anisotropy electric conduction layer attachment position A of the above 1st, the above-mentioned inversion device 17, 2nd anisotropy electric conduction layer attachment position B, and the above-mentioned cell issue device 18 is made to stop it one by one.

[0078] In addition, the image pick-up camera 27 for picturizing the + mark for a positioning 7 prepared in the 1st of the liquid crystal cell 2 held on the above-mentioned adsorption arm 31 and the 2nd liquid crystal glass substrate 2a and 2b is arranged in the length orientation halfway section of the above-mentioned X guide rail 28 where the image pick-up side is turned up.

[0079] Next, the anisotropy electric conduction layer attachment device 14 of the above 1st is explained.

[0080] From on the above-mentioned pedestal 10, the mainframe 33 which has the front face formed in the abbreviation perpendicular is set up. In the front face of this mainframe 33, the tabular vertical move plate 34 (mobile) is held free [ a vertical move ]. The positioning drive of the move-under besides plate 34 is carried out in the vertical orientation by vertical drive cylinder 36a (drive means of a mobile) of the couple arranged between soffit both the corners of this vertical move plate 34, and the above-mentioned pedestal 10.

[0081] In addition, when it is arranged in the site corresponding to the four corners of the above-mentioned vertical move plate 34 and this vertical move plate 34 drives in the vertical orientation, shock absorber 36b-- which contacts this vertical move plate 34 elastically, and absorbs the shock is prepared in the front face of the above-mentioned mainframe 33.

[0082] Next, each device prepared in this vertical move plate 34 is explained.

[0083] Drawing 2 is the front view expanding and showing the above-mentioned vertical mobile 34. The supply reel shown in drawing by 35 is formed in the height orientation halfway section on the left-hand side of [ surface (transverse plane) ] the move-under besides plate 34. As shown in drawing 3 (a), the winding receipt of the anisotropy electric conduction layer 4 (adhesive tape) which the 1st and the 2nd release paper 6a and 6b are stuck on both sides, and becomes them is carried out at this supply reel 35.

[0084] That is, the above-mentioned anisotropy electric conduction layer 4 is the member of the shape of a tape of double-sided tackiness, and in order to prevent that dust etc. adheres, the 1st

and the 2nd release paper 6a and 6b which were similarly formed in the shape of a tape cover an overall length, and are stuck on the both sides.

[0085] In addition, in this example, for convenience, when pulled out from the above-mentioned supply reel 35 in drawing 2 , the release paper located in a 1st release-paper 6a and top side ( drawing 3 ) in the release paper located in the inferior-surface-of-tongue side ( drawing 3 on) of the above-mentioned anisotropy electric conduction layer 4 is called 2nd release-paper 6b.

[0086] As shown in drawing 1 , after pulling out the above-mentioned anisotropy electric conduction layer 4 and the above 1st, and the 2nd release paper 6a and 6b from this supply reel 35, they are prepared in the upper part of the above-mentioned vertical move plate 34, and are wound around the 1st roller 37 (move roller) which \*\*\*\*s with release-paper 6a of the above 1st.

[0087] This 1st roller 37 is held possible [ a move in the vertical orientation ] along with this slit 38 in the 1st slit 38 formed in the front face of this vertical move plate 34 along the vertical orientation. And this 1st roller 37 is energized upward (orientation which gives a tension for the above-mentioned anisotropy electric conduction layer 4) by the 1st weight (energization means) shown in drawing by 39.

[0088] After passing this 1st roller 37, the near field where release-paper 6b of the above 2nd was stuck on the 2nd roller 40 with which the 1st above-mentioned slit 38 was formed caudad is made, as for the above-mentioned anisotropy electric conduction layer 4, to \*\*\*\*.

[0089] As shown in drawing, release-paper 6b of the above 2nd exfoliates from the above-mentioned anisotropy electric conduction layer 4 with this 2nd roller 40, and is drawn by the upper part of this vertical move plate 34 with the 4th roller 42 formed in the upper part of this 2nd roller 40, the 3rd roller 41 formed in the same height, and the above-mentioned vertical move plate 34.

[0090] And after winding this 2nd release-paper 6b around the 5th roller 43 (move roller) bottom, it is \*\*\*\*ed in order on the 6th and the 7th roller 44 and 45, and is rolled round one by one to the 2nd release-paper take-up reel shown in drawing by 46.

[0091] In addition, the supply reel 35 mentioned above and this 2nd release-paper take-up reel 46 are connected to the 1st and the 2nd drive motor 48 and 49 (reel drive means) which carry out the rotation drive of these, respectively. And when this 1st [ the ] and the 2nd drive motor 48 and 49 do not operate, the above-mentioned supply reel 35 and the 2nd release-paper take-up reel 46 are held at the rotation impotentia, respectively.

[0092] Moreover, the 5th above-mentioned roller 45 is held as well as the 1st above-mentioned roller 37 possible [ a vertical move into the 2nd slit 50 prepared in the front face of the above-mentioned vertical move plate 34 ], and is energized downward (orientation which gives a tension to release-paper 6b of the above 2nd) by the 2nd weight shown in drawing by 51.

[0093] And it is prepared in the upper-limit section and the soffit section of this 1st [ the ] and the 2nd slit 38 and 50 face to face, and the upper-limit section sensor 52 and the soffit section sensor 53 which detect the 1st above-mentioned roller 37 or the 5th roller 45 are arranged by the 1st in which the 1st above-mentioned roller 37 and this 5th roller 45 were formed, and the 2nd slit 38 and 50, respectively.

[0094] These upper-limits section sensor 52 and the soffit section sensor 53 are connected to the control section shown in drawing by 47. the above-mentioned control section 54 Based on the detecting signal from these upper-limits section and the soffit section sensors 53 and 54, the above 1st and the 2nd drive motor 48 and 49 are controlled. A rolling-up operation of release-paper 6b of the above 2nd is performed to the above-mentioned supply reel 35 at a delivery operation of the above-mentioned anisotropy electric conduction layer 4, and the release-paper take-up reel 46 of the above 2nd.

[0095] In addition, the delivery device of this invention consists of a supply reel 35 mentioned above, the 2nd release-paper take-up reel 46, the 1st, - the 7th roller 37-45, etc.

[0096] The anisotropy electric conduction layer 4 after it passed the 2nd above-mentioned roller 40 and release-paper 6b of the above 2nd exfoliated is in the status (status shown in drawing 3 (b)) held at release-paper 6a of the above 1st, and is supplied to the cutting-machine style 54 in



which this 23rd roller 41 was formed caudad.

[0097] This cutting-machine style 54 is held in the 1st breakthrough 55 drilled by the above-mentioned vertical move plate 34. It \*\*\*\*s in the upper and lower sides which sandwiched this 1st breakthrough 55 with release-paper 6a of the above 1st, and the rollers for guidance 56 and 56 of the couple which shows the above-mentioned anisotropy electric conduction layer 4 to an abbreviation perpendicular direction are formed in them.

[0098] while the above-mentioned anisotropy electric conduction layer 4 is guided with these rollers for guidance 56 and 56 -- every [ a predetermined dimension ] -- it sends intermittently, and it drives and a predetermined cleavage site is stopped at this cutting-machine guard 54

[0099] Next, the configuration of this cutting-machine style 54 is explained in detail with reference to drawing 4 (a) and (b).

[0100] This cutting-machine style 54 consists of an attaching part 57 holding the above-mentioned anisotropy electric conduction layer, and the disconnection section 58 piece [ of an anisotropy electric conduction layer ] 4' (piece of an adhesive tape) Carried out by leaving release-paper 6a of the above 1st, and cutting the anisotropy electric conduction layer 4 held at this attaching part 57 as shown in drawing 3 (c).

[0101] First, the above-mentioned attaching part 57 is explained.

[0102] As shown in drawing 4 (a) and (b), the hold plate shown in drawing in the form which blockades the inside of the 1st above-mentioned breakthrough 55 59 is being fixed to the rear face of the above-mentioned vertical drive plate 34. The bracket shown in drawing by 60 is being fixed to the front-face side of this hold plate in the status that the point was made to project from the front face of the above-mentioned vertical move plate 34.

[0103] The rectangle-like guide plate 62 is held at the point of this bracket 60, where the slideway (a front face and rear face) is made parallel with the front face of the above-mentioned vertical move plate 34 and the above-mentioned hold plate 59. The 1st and 2nd slide member 63 and 64 (1st [ the ], 2nd direct-acting device) is attached in the slideway of this guide plate 62 respectively free [ a slide to a horizontal direction ].

[0104] The this 1st [ the ] and 2nd slide member 63 and 64 is making points 63a and 64a project to the above-mentioned disconnection section 58 side, respectively. And the notches 63b and 64b of the shape of a character of \*\* are formed in the center of the point of the this 1st [ the ] and 2nd slide member 63 and 64, respectively. And between point 63a of the above 1st and the 2nd slide member 63 and 64, and 64a, the attachment component 65 which located both ends in each above-mentioned notch 63b and 64b is constructed.

[0105] And the 1st hold pin 66 constructed in this notch 63b penetrates, and by this, this attachment component 65 uses this 1st hold pin 66 as the supporting point, and is supported free [ titubation ] by the end section located in notch 63b of the slide member 63 of the above 1st of this attachment component 65.

[0106] Moreover, the level difference shown in drawing by 65a is prepared in the other end located in notch 64b of the slide member 64 of the above 2nd of the above-mentioned attachment component 65. And this attachment component 65 is making this level difference 65a contact the periphery side of the 2nd hold pin 67 constructed in the above-mentioned notch 64.

[0107] In addition, the end of the spring shown in drawing by 68 is fixed to the other end of this attachment component 65, and the other end of this spring 68 is being fixed to the stop pin 70 which protruded on the front-face side of the above-mentioned guide plate 62. Therefore, the level difference prepared in the other end of the above-mentioned attachment component 65 is energized so that the hold pin 67 of the above 2nd may always be contacted.

[0108] Thus, the plinth 71 holding the field side where release-paper 6a of the above 1st of the above-mentioned anisotropy electric conduction layer 4 was stuck is being fixed to the field which counters the above-mentioned disconnection section 58 of the attachment component 65 held at the above 1st and the 2nd slide member 63 and 64.

[0109] On the other hand, the 1st of the letter of abbreviation of L characters shown in drawing by 72 and 73 and the 2nd bracket protrude on the side face of the halfway section which meets in



the slide orientation of the above 1st and the 2nd slide member 63 and 64, respectively. The 1st and 2nd driven pin shown in drawing by 74 and 75, respectively is being fixed to this 1st [ the ] and the 2nd bracket 72 and 73 where an axis is leveled.

[0110] On the other hand, the 3rd and the 4th bracket 76 and 77 which counter with the end face of the above 1st and the 2nd driven pin 74 and 75 are being fixed to the above-mentioned guide plate 62. The 1st which made nose of cam \*\*\*\*\* contact the end face of the above 1st and the 2nd driven pin 74 and 75, and the 2nd micrometer 79 and 80 are being fixed to this 3rd [ the ] and the 4th bracket 76 and 77 where an axis is similarly leveled.

[0111] Therefore, the above 1st and the 2nd slide member 63 and 64 are operating each above-mentioned micrometers 79 and 80, and carry out a slide drive horizontally along with the above-mentioned guide plate 62. And while this can adjust the inclination of the plinth 71 held at the above-mentioned attachment component 65, the above-mentioned plinth 71 can be moved in the orientation which \*\*\*\*s in the orientation of the above-mentioned disconnection section 58.

[0112] Next, the configuration of the above-mentioned disconnection section 58 is explained.

[0113] This disconnection section 58 has the drive cylinder 82 (actuator) fixed to the rear face of the above-mentioned hold plate 59 by leveling an axis. The driver 83 which made point 83a project from the front face of the above-mentioned vertical move plate by it being held horizontally free [ a slide ] at the rear face of the above-mentioned hold plate 59, and being crooked in the shape of abbreviation of L characters in the halfway section is connected to driving shaft 82a of this drive cylinder 82.

[0114] Point 83a of this driver 83 extends in the position which counters the above-mentioned plinth 71, and is attached in the field which counters the above-mentioned plinth 71 of this point 83a free [ a slide in the orientation in which the feed direction of the above-mentioned anisotropy electric conduction layer 4 and the disconnection blade attachment component 84 cross at right angles ].

[0115] The point of the bolt 86 held free [ rotation at the nose of cam of the above-mentioned driver 83 ] is screwed on this disconnection blade attachment component 84. Therefore, the slide-position arrangement of the above-mentioned disconnection blade attachment component 84 is carried out by binding tight or loosening this bolt 86.

[0116] It is held at this disconnection blade attachment component 84 in the status that the disconnection blade 87 went out and the cutting part was made to project in the orientation of the above-mentioned plinth 71. This disconnection blade 87 has width of face several times the length of the above-mentioned anisotropy electric conduction layer 4, and is being fixed to the above-mentioned disconnection blade attachment component 84 in the status that the feed direction of the above-mentioned anisotropy electric conduction layer 4 and the length orientation were made to cross at right angles.

[0117] Namely, the above-mentioned disconnection blade 87 can shift now the site which cuts the above-mentioned anisotropy electric conduction layer 4 by adjusting the above-mentioned bolt 86 and moving the above-mentioned disconnection blade attachment component 83.

[0118] Moreover, it protrudes on the opposite side of point 83a of the above-mentioned driver 83, and the above-mentioned guide plate 62 from each member, and the specification-part material 88 and 89 (regulation means) of the couple which regulates the movement magnitude of the above-mentioned disconnection blade 87 by making apical surfaces contact mutually is being fixed to it. In addition, as shown in drawing 5, when these contact mutually, the notches 88a and 89a used as the path of the above-mentioned anisotropy electric conduction layer 4 are formed in the contact side of this specification-part material 88 and 89, respectively.

[0119] This cutting-machine style 54 drives the above-mentioned disconnection blade 87 in the orientation of the above-mentioned plinth 71 by operating the above-mentioned drive cylinder 82, leaves release-paper 6a of the above 1st, and cuts the anisotropy electric conduction layer 4 held at this plinth 71. ( Drawing 3 (c) )

Although this cutting-machine style 54 cuts only the above-mentioned anisotropy electric conduction layer 4 in this way, in order to cut only the above-mentioned anisotropy electric

conduction layer 4, it needs to adjust the path clearance and parallelism between the above-mentioned disconnection blade 87 and the above-mentioned plinth 71 with high precision. For this reason, this cutting-machine style 54 is adjusted by the following operations.

[0120] First, the above-mentioned disconnection blade 87 is driven to the position where the above-mentioned specification-part material 88 and 89 contact, and it holds in the position. Subsequently, the path clearance and parallelism of the above-mentioned disconnection blade 87 and the above-mentioned plinth 71 are checked, and the above-mentioned path clearance and parallelism are simultaneously adjusted by adjusting the 1st above-mentioned micrometer 79, the 2nd micrometer 80, or its both if needed.

[0121] This cutting-machine style 54 is operating the above-mentioned drive cylinder 82, whenever the predetermined dimension delivery drive of the above-mentioned anisotropy electric conduction layer 4 and the 1st release-paper 6a is carried out, it leaves release-paper 6a of the above 1st using the above-mentioned disconnection blade 8, cuts the above-mentioned anisotropy electric conduction layer 4, and manufactures piece of anisotropy electric conduction layer 4' of a predetermined length dimension.

[0122] Thus, as shown in drawing 2, cut piece of anisotropy electric conduction layer 4' is in the status held at release-paper 6a of the above 1st, and is discharged from this cutting-machine style 54. (Status shown in drawing 3 (c))

1st release-paper 6a holding this piece of anisotropy electric conduction layer 4' is guided at an abbreviation horizontal direction with the above-mentioned roller for guidance 56 formed in this cutting-machine style 34 bottom, and is supplied to 1st anisotropy electric conduction layer attachment position A (only henceforth "attachment position A") in which the 1st above-mentioned backup 8 was formed.

[0123] By this, this piece 4 of an anisotropy electric conduction layer will counter 1st glass-substrate 2a of the liquid crystal cell 2 held on the 1st above-mentioned backup 8 in the adhesive-face side in which release-paper 6b of the above 2nd exfoliated. (Status similarly shown in drawing 3 (c))

In addition, between the above-mentioned attachment position A and the above-mentioned roller for guidance 56, the adsorption nozzle 90 which carries out the adsorption hold of the top of release-paper 6a of the above 1st holding above-mentioned piece of anisotropy electric conduction layer 4' is arranged. the inferior surface of tongue of this adsorption nozzle 90 -- much suction -- a hole -- 90a -- opening -- carrying out -- this suction -- a hole -- the other end side of 90a is connected to the vacuum devices not to illustrate

[0124] This adsorption nozzle 90 constitutes a delivery drive means to send and drive release-paper 6a of the above 1st with the clamp device shown in drawing established in the opposite side which sandwiched this adsorption nozzle 90 and the above-mentioned attachment position A by 91, and to supply above-mentioned piece of anisotropy electric conduction layer 4' to the above-mentioned attachment position A.

[0125] This clamp device 91 is sent, and release-paper 6a of the above 1st is driven, and it has come to be carrying out the both-way move of these chucks 92 and 92 along with the 1st above-mentioned release paper, and to be able to carry out the thing of it while it possesses the chucks 92 and 92 of a couple and carries out the clamp hold of the 1st release-paper 6a using the chucks 92 and 92 of this couple.

[0126] And the above-mentioned adsorption nozzle 90 is interlocked with that the above-mentioned chuck 92 clamped release-paper 6a of the above 1st, cancels the clamp of release-paper 6a of the above 1st, is interlocked with that the above-mentioned chuck 92 canceled the clamp of release-paper 6a of the above 1st, and carries out the adsorption hold of the release-paper 6a of the above 1st again.

[0127] By these operations, the predetermined dimension [ every ] delivery drive of the release-paper 6a of the above 1st is carried out, without producing a position gap of a feed direction.

[0128] in addition -- the above -- attachment -- a position -- A -- inside -- \*\*\*\* -- the above -- the -- one -- a release paper -- six -- a -- holding -- having had -- a plurality -- an anisotropy --

electric conduction -- a layer -- a piece -- four -- ' -- a break -- recognizing -- a break -- a sensor -  
- 93 -- preparing -- having -- \*\*\*\* . That will be detected if the break of this break sensor [ 93 ]  
of above-mentioned piece of anisotropy electric conduction layer 4' corresponds with the end-  
face position of insertion section 119a of the insertion tool 119 mentioned later as an alternate  
long and short dash line shows to drawing.

[0129] Based on the break of above-mentioned piece of anisotropy electric conduction layer 4'  
having been detected by the above-mentioned break sensor 93, the delivery drive means which  
consists of the above-mentioned clamp device 91 and an adsorption nozzle 90 stops delivery of  
release-paper 6a of the above 1st, and positions the feed direction of above-mentioned piece of  
anisotropy electric conduction layer 4'.

[0130] moreover -- the above -- the -- one -- a release paper -- six -- a -- and -- an anisotropy --  
electric conduction -- a layer -- four -- inserting -- the above -- adsorption -- a nozzle -- 90 -- a  
lower part -- \*\*\*\* -- the above -- a cutting machine -- a style -- 54 -- manufacturing -- having  
had -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- inside -- being  
unnecessary -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- the above --  
the

[0131] The mainframe 96 held free [ a vertical move ] in the vertical drive cylinder which shows  
this anisotropy electric conduction layer sublation equipment 94 in drawing 95, The file reel 98  
which it lets out one by one while it is prepared in the lower part of this mainframe 96 and the  
winding hold of the adhesive tape 97 which makes a field an adhesive face is carried out, this file  
reel 98 and abbreviation -- it is prepared in the take-up reel 99 which is prepared in the same  
height and rolls round the above-mentioned adhesive tape 97, and the upper part of the above-  
mentioned mainframe 96, and consists of two set-up rollers 100 and 101 which stretch the above-  
mentioned adhesive tape 97 where the adhesive face is turned up

[0132] If piece of anisotropy electric conduction layer 4' unnecessary to the upper part of this  
sublation equipment 94 is stopped, this anisotropy electric conduction layer sublation equipment  
94 will be raising the above-mentioned mainframe 96, as shown in drawing 6 (a) and (b), and  
will contact the adhesive face of the above-mentioned adhesive tape 97 to the adhesive face of  
the piece of anisotropy electric conduction layer 4'. Subsequently, as shown in this drawing (c),  
release-paper 6a of the above 1st to above-mentioned piece of anisotropy electric conduction  
layer 4' is exfoliated by carrying out the down drive of the above-mentioned mainframe 97.

[0133] And it does in this way, and the above-mentioned file reel 98 and the take-up reel 99  
operate, it is that the above-mentioned adhesive tape 97 is sent, and it is rolled [ piece of  
anisotropy electric conduction layer 4' which exfoliated is led to the lower part from the upper  
part of the above-mentioned mainframe 96, and ] round to the above-mentioned take-up reel 99  
one by one.

[0134] On the other hand, as shown in drawing 2 , while release-paper 6a of the above 1st is  
guided, the 1st of the couple which carries out the positioning hold of piece of anisotropy electric  
conduction layer 4' supplied to the above-mentioned attachment position A, and the 2nd guide  
idler 103 and 103 are arranged in the site corresponding to the both sides which sandwich the  
above-mentioned attachment position A of the above-mentioned vertical move plate 34.

[0135] Hereafter, the configuration of this guide idler 103 is explained with reference to drawing  
7 .

[0136] The breakthrough shown in drawing by 104 is drilled in the position in which the above-  
mentioned guide idler 103 of the above-mentioned vertical mobile 34 was formed. The 1st guide  
member 106 is supported free [ rotation ] through thrust bearing 105 by the site by the side of the  
front face of the above-mentioned vertical mobile 34 of this breakthrough 104.

[0137] This 1st guide member 106 is a member of the shape of a cylinder which has salient 106a  
covering a hoop-direction overall length in the periphery side of the length orientation halfway  
section. The push rod 107 which penetrates this 1st guide member 106 to shaft orientations is  
arranged in the interior of this 1st guide member 106 free [ a shaft-orientations slide ].

[0138] The slide drive of this push rod 107 is carried out with the cylinder equipment 109 fixed

to the rear face of the above-mentioned vertical mobile 34. Moreover, the flange shown in drawing by 107a is formed in the length orientation halfway section of this push rod 107, and the spring 108 is inserted in it in the status that it was compressed elastically, between this flange 107a and the above-mentioned thrust bearing 105.

[0139] Moreover, the 2nd guide member 110 of the shape of a lid extrapolated free [ the attachment and detachment to the end face of the guide member 106 of the above 1st ] is being fixed at the nose of cam projected from the end face of the guide member 106 of the above 1st of this push rod 107.

[0140] The guide member 110 of the above 2nd is with salient 106a formed in the end face by the side of the above-mentioned vertical move plate 34, and the periphery side of the guide member 106 of the above 1st, and constitutes the guide slot 111 which guides release-paper 6a and the anisotropy electric conduction layer 4 of the above 1st.

[0141] And while release-paper 6a of the above 1st is sending and driving, the above-mentioned guide slot 111 makes the width-of-face t larger than the width of face of release-paper 6a of the above 1st, and piece of anisotropy electric conduction layer 4' with the driving force of the above-mentioned cylinder equipment 109, as shown in drawing 6 .

[0142] on the other hand -- the above -- the -- one -- a release paper -- six -- a -- delivery -- stopping -- having -- this -- the -- one -- a release paper -- six -- a -- holding -- having had -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- the above -- attachment -- a position -- A -- stopping -- having had -- if -- the above -- a cylinder -- equipment -- 109 -- driving force -- canceling -- things -- the stability of the above-mentioned spring 108 -- width-of-face t of the

[0143] By this, release-paper 6a of the above 1st and piece of anisotropy electric conduction layer 4' can be inserted in this guide slot 111, and the piece 4 of an anisotropy electric conduction layer supplied to the above-mentioned attachment position A can be positioned crosswise now from the both sides which sandwich this attachment position A.

[0144] The anisotropy electric conduction layer attachment section 113 which sticks above-mentioned piece of anisotropy electric conduction layer 4' on 1st liquid crystal glass-substrate 2a of the above-mentioned liquid crystal cell 2 is formed in the center section of the move-under besides plate 34, i.e., the upper part of the above-mentioned attachment position A. Hereafter, the configuration of this attachment section 113 is explained with the operation.

[0145] As shown in drawing 2 , the 2nd breakthrough 114 penetrated in the thickness orientation of this vertical move plate 34 is formed in the center section of the above-mentioned vertical move plate 34. While soffit guide side 115a is located in the 2nd above-mentioned breakthrough 114, the Y guide rail 115 prepared along the orientation of Y is being fixed to the upper part of the above-mentioned vertical move plate 34.

[0146] As shown in the drawing 2 and the drawing 8 , Y directional movement field 117 is attached in guide side 115a of this Y guide rail 115 free [ the orientation slide of Y ] through the slider 116. The positioning drive of this Y directional movement field 117 is carried out with Y drive motor which was formed in the above-mentioned Y guide rail 115 and not to illustrate.

[0147] As shown in drawing 7 and the drawing 8 on the inferior surface of tongue of the above-mentioned Y directional movement field 117, the vertical guide plate 118 is being fixed to the abbreviation perpendicular where the orientation of a field is made parallel with the front face of the above-mentioned vertical move plate 34.

[0148] As shown in drawing 8 , the insertion tool 119 which equips 1st liquid crystal glass-substrate 2a with piece of anisotropy electric conduction layer 4' supplied to the above-mentioned attachment position A is formed in the front-face side of this vertical guide plate 118 free [ a vertical move ] through the slider 120.

[0149] Moreover, similarly the sticking-by-pressure tool 122 which sticks by pressure piece of anisotropy electric conduction layer 4' with which liquid crystal glass-substrate 2a of the above 1st was equipped to liquid crystal glass-substrate 2a of the above 1st is formed in the rear-face side of this vertical guide plate 118 free [ a vertical move ] through the slider 123 by the above-

mentioned insertion tool 119.

[0150] The vertical drive of these insertion tool 119 and the sticking-by-pressure tool 122 is carried out in the vertical drive cylinder (not shown) of the individual by \*\*\*\*\*.

[0151] moreover -- although only the insertion tool 119 is illustrated in drawing 8 -- the soffit side of each tools 119 and 122 -- respectively -- the feed direction of above-mentioned piece of anisotropy electric conduction layer 4' -- a long picture -- they are insertion section 119a and press section 122a

[0152] And although deer illustration similarly is not carried out only about the above-mentioned insertion tool 119 in drawing, the top and the above-mentioned vertical guide plate 118 of the above-mentioned insertion section 119a and press section 122a are elastically connected in the vertical orientation by the damper shown in drawing by 124.

[0153] the time of pushing above-mentioned piece of anisotropy electric conduction layer 4' against liquid crystal glass-substrate 2a of the above 1st by work of this damper 124 with the above-mentioned insertion tool 119 and the sticking-by-pressure tool 122 -- above-mentioned piece of anisotropy electric conduction layer 4' -- the length orientation overall length -- continuing -- abbreviation -- it can press down now by the uniform pressure

[0154] Next, another \*\*\*\* explanation of the configuration of the above-mentioned insertion tool 119 and the press tool 122 is given.

[0155] First, the above-mentioned insertion tool 119 is explained.

[0156] suction for carrying out the adsorption hold of above-mentioned piece of anisotropy electric conduction layer 4' through release-paper 6a of the above 1st in this soffit side, while the soffit side of insertion section 119a of the above-mentioned insertion tool 119 is formed in abbreviation flatness, as shown in drawing 8 -- a hole 126 continues crosswise and is carrying out opening of the more than one each suction -- it connects with the vacuum devices not to illustrate and a hole 126 generates a suction force in the soffit side of this insertion section 119a

[0157] moreover -- this -- insertion -- the section -- 119 -- the side face -- \*\*\*\* -- this -- insertion -- the section -- 119 -- a -- a soffit -- a field -- adsorption -- a hold -- having carried out -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- positioning -- a sake -- a positioning -- a device -- 127 -- preparing -- having -- \*\*\*\* .

[0158] this -- a positioning -- a device -- 127 -- drawing -- seven -- being shown -- as -- the above -- insertion -- the section -- 119 -- a -- the cross direction -- ends -- a field -- a height -- orientation -- halfway -- the section -- \*\*\*\* -- outside -- a way -- vegetation -- the bottom -- vegetation -- a shaft -- 128 -- rotation -- free -- supporting -- having -- a soffit -- the section -- the above -- insertion -- the section -- 119 -- a -- a soffit -- a field --

[0159] This contact field 129 is supported pivotably by the point of driving shaft 131a of the direct-acting cylinder 131 supported free [ titubation ] with the bracket 130 fixed to the side face of insertion section 119a of the above-mentioned insertion tool 119.

[0160] therefore -- this -- direct-acting -- a cylinder -- 131 -- the above -- a driving shaft -- 131 -- a -- \*\*\*\* -- a drive -- carrying out -- things -- drawing -- nine -- ( -- a -- ) -- being shown -- as -- the above -- contact -- the field -- 129 -- the above -- vegetation -- a shaft -- 128 -- the surroundings -- titubation -- a drive -- carrying out -- having -- the above -- insertion -- the section -- 119 -- a -- a soffit -- a field -- adsorption -- a hold --

[0161] Thus, if a positioning is made, the drive cylinder 35 ( drawing 1 ) which carries out the vertical drive of the above-mentioned vertical mobile 34 will operate, and the down drive of the above-mentioned vertical mobile 34 will be carried out. As this shows to drawing 9 (b), it is equipped with above-mentioned piece of anisotropy electric conduction layer 4' in the status that it was positioned to liquid crystal glass-substrate 2a of the above 1st.

[0162] Thus, if liquid crystal glass-substrate 2a of the above 1st is equipped with above-mentioned piece of anisotropy electric conduction layer 4', adsorption of this piece of anisotropy electric conduction layer 4' is canceled, the elevation drive of the above-mentioned insertion tool 119 will be carried out, and it will be estranged to the upper part from above-mentioned piece of anisotropy electric conduction layer 4'.

[0163] Next, the above-mentioned sticking-by-pressure tool 122 is explained.

[0164] the above -- sticking by pressure -- a tool -- 122 -- the above -- Y -- directional movement -- the field -- 117 -- the above -- Y -- a guide rail -- 115 -- meeting -- driving -- having -- things -- it is -- drawing -- ten -- being shown -- as -- the above -- sticking by pressure -- the section -- 122 -- a -- a soffit -- a field -- the above -- the -- one -- a glass substrate -- one -- a -- equipping -- having had -- an anisotropy -- electric conduction -- a layer -- a piece --

[0165] While the heating heater shown in drawing by 131 is laid underground in sticking-by-pressure section 122a of this sticking-by-pressure tool 122, the soffit side is formed in abbreviation flatness like insertion section 119a of the above-mentioned insertion tool 119.

[0166] On the other hand, this sticking-by-pressure tool 122 is equipped with the pad feeder style 133 which supplies the pad shown in drawing 11 by 132 to the soffit side of this sticking-by-pressure tool 122. This pad 132 is inserted between the soffit side of sticking-by-pressure section 122a of the above-mentioned sticking-by-pressure tool 122, and the field where release-paper 6a of the above 1st of above-mentioned piece of anisotropy electric conduction layer 4' was stuck. In case above-mentioned piece of anisotropy electric conduction layer 4' is stuck to liquid crystal glass-substrate 2a of the above 1st by pressure, the impact applied to above-mentioned piece of anisotropy electric conduction layer 4' from the above-mentioned sticking-by-pressure tool 132 is eased, and this piece of anisotropy electric conduction layer 4' is crushed, and it has the role which prevents that internal electric conduction grain contacts and suits.

[0167] Hereafter, lessons is taken from this pad feeder style 133, and it explains with reference to drawing 11 .

[0168] The above-mentioned pad feeder style 133 possesses the cassette field 135 constructed free [ attachment and detachment ] between the soffit of the extension section 134 which extended to down from the edge by the side of the rear face of the above-mentioned vertical guide plate 118 of the above-mentioned Y directional movement field 117, and \*\*\*\*\* of the above-mentioned vertical guide plate 118.

[0169] This cassette field 135 possesses the case 136 constituted so that it could remove from the above-mentioned extension section 134 and the vertical guide plate 118. This case 136 consists of the side plate 136b of the couple which connects the both ends of end plate 136a of the couple by which opposite arrangement was carried out, and end plate 136a of this couple, as shown in drawing 12 .

[0170] Moreover, among end plate 136a of the above-mentioned couple, winding side center rod part material 137a (winding roll) of the couple estranged in parallel and delivery side medial-axis member 137b (delivery roll) are constructed respectively free [ rotation ] .

[0171] the medial-axis members 137a and 137b of the above-mentioned couple -- respectively -- a long picture -- the winding hold of the both ends of the sheet-like pad 132 is carried out And the halfway section of the above-mentioned pad 132 is stretched between medial-axis member 137a of the above-mentioned couple, and 137b.

[0172] Moreover, the tongue 138 for rotating this medial-axis member 137 manually is attached in the end side projected from above-mentioned one end plate 136a of the medial-axis members 137a and 137b of the above-mentioned couple.

[0173] On the other hand, it projected from other-end plate 136a of the above-mentioned winding side medial-axis member 137a of the medial-axis members 137a and 137b of the above-mentioned couple, and also the piece 139 of a stop stopped with the drive 147 explained later is formed in one end in one.

[0174] And the delivery edge of this medial-axis member 137a is detected, and the pad end detecting element 141 for telling an end of the above-mentioned pad 132 is formed in the other end side of the above-mentioned delivery side medial-axis member 137b.

[0175] This detecting element 141 is constituted as shown in drawing 13 .

[0176] In the above-mentioned end plate 136a, the insertion member 142 which penetrates this end plate 136a is formed free [ the slide to the shaft orientations of the above-mentioned medial-axis member 137b ]. It projects in the orientation of a internal surface of parietal bone of the

above-mentioned end plate 136a of this insertion member 142, and the edge is inserted in the other end of the above-mentioned medial-axis member 137b free [ a slide ].

[0177] The above-mentioned insertion member 142 and the above-mentioned medial-axis member 137 are inserting height 142a (regulation means) of the shape of a pin which protruded on the tip section of the above-mentioned insertion member 142 into slit 137a formed in the other end of the above-mentioned medial-axis member 137 in accordance with shaft orientations, and are connected with the relative rotation impotentia.

[0178] Moreover, height 142a prepared in the above-mentioned insertion member 142 is stopped to the cross direction 1 side of this pad 132, when it projects in the method of outside [ side / periphery / of the above-mentioned medial-axis member 137b ] and the above-mentioned pad 132 is wound around this medial-axis member 137b.

[0179] And in this way, when the above-mentioned height 142a has stopped to the above-mentioned pad 132, the other end of the above-mentioned insertion member 142 is regulated to a way outside the above-mentioned end plate 136a so that predetermined dimension vegetation may be carried out.

[0180] Moreover, the above-mentioned insertion member 142 is energized in the orientation of the above-mentioned medial-axis member 137b with the spring (energization means) shown in drawing by 143. That is, although it is going to absorb in the above-mentioned end plate 136a according to the energization force of this spring 143, when the above-mentioned pad 132 is wound around this medial-axis member 137b, since the above-mentioned height 142a stops the other end of the above-mentioned medial-axis member 137b to the above-mentioned pad, the move regulates it.

[0181] However, since the stop status of this above-mentioned pad 132 and the above-mentioned height 142a will be canceled after the above-mentioned pad 132 lets all out from this medial-axis member, the above-mentioned insertion member 142 will be moved in the orientation of the above-mentioned medial-axis member 137b according to the stability of the above-mentioned spring 143, and the other end of this insertion member 142 will be contained in the above-mentioned end plate 136a.

[0182] A delivery end of the above-mentioned pad 132 detects by the other end of the above-mentioned insertion member 142 being absorbed in the above-mentioned end plate 136a in this way so that it may mention later.

[0183] On the other hand, the drive 147 which drives winding side medial-axis member 137a prepared in the above-mentioned medial-axis member 137 in the winding orientation is formed in the soffit of the above-mentioned extension section 134 in which this cassette field 135 is attached.

[0184] Drawing 14 is a cross section which meets the C-C line of this drive 147.

[0185] the bracket 148 with which this drive 147 was fixed to the soffit section of the above-mentioned extension section 134 (not shown in this drawing), and this bracket 148 -- an axis -- abbreviation -- it has the drive motor 149 fixed in the status that it leveled

[0186] The driven shaft 151 by which driving shaft 149a of this drive motor 149 was connected to drawing through distributor shaft coupling shown by 150 is attached, and the driver 152 is being fixed to this driven shaft 151.

[0187] Moreover, the above-mentioned driven shaft 151 is held free [ rotation ] by the 1st piece 153 of a hold which extended the end section caudad. This 1st piece 153 of a hold is being fixed to the above-mentioned extension section 134 (not shown) like the above-mentioned bracket 148.

[0188] The rotation axis 157 is held free [ rotation ] at the end section (soffit section) of this 1st piece 153 of a hold, where the above-mentioned driven shaft 151 and an axis are made parallel. The collar gear 140 is formed on the same axle through the one-way clutch shown in drawing by 154 at the end side of this rotation axis 157. This collar gear 140 gears with the above-mentioned driver 152, and transmits the turning effort of the above-mentioned drive motor 149 to the above-mentioned rotation axis 157.



[0189] On the other hand, engagement slot 157a which it is prepared along the diameter orientation of the other end side of this rotation axis 157, and is opened to this field is prepared in the other end side of the above-mentioned rotation axis 157. Into this engagement slot 157a, the piece 139 of engagement fixed to the other end of the above-mentioned medial-axis member 137a is inserted, and it engages with this piece 139 of engagement.

[0190] Moreover, in the position which is established in the above-mentioned drive 147 and counters the soffit section of the 1st piece 151 of a hold along the orientation of an axis of the above-mentioned medial-axis member 137a, where the upper-limit section which the soffit section of the 2nd piece 170 of a hold holding the end side of this medial-axis member 137a does not illustrate is fixed in the above-mentioned vertical guide plate 118, it has extended.

[0191] Notch slot 170a of the shape of a slit which an end side opens horizontally is prepared in the soffit section of this 2nd piece 170 of a hold. Into this notch slot 170a, the tongue section 138 formed in the end of the above-mentioned winding side medial-axis member 137a inserts horizontally.

[0192] On the other hand, as shown in drawing 11, the magnet shown in drawing by 155 is prepared in the top of the site attached in the soffit of the above-mentioned vertical guide plate 118 of the above-mentioned cassette field 135.

[0193] Therefore, in case the above-mentioned cassette field 135 is attached in the extension section 134 and the above-mentioned vertical guide plate 118 of the above-mentioned Y directional movement field 117, as shown in drawing 11, an above-mentioned winding side medial-axis member 137a side is attached first.

[0194] That is, it holds, where the above-mentioned cassette field 135 is leaned, as shown in drawing, and while the piece 139 of engagement prepared in the other end of the above-mentioned winding side medial-axis member 137a is horizontally inserted into engagement slot 157a in which it was prepared by the rotation axis 157 of the above-mentioned drive 147, the tongue section 138 prepared in the end section of this medial-axis member 137a is inserted horizontally the same in notch slot 170a of the piece 170 of a hold of the above 2nd. The above-mentioned winding side medial-axis member 137a side of the above-mentioned cassette field 135 is held by this by the above-mentioned drive 147 and the 2nd piece 170 of a hold.

[0195] Next, the site in which the above-mentioned magnet 155 was formed by rotating this cassette field 135 upward to the circumference of the axis of the above-mentioned winding side medial-axis member 137a is made to contact the soffit of the above-mentioned vertical guide plate 118.

[0196] At this, the above-mentioned cassette field 135 can be attached by one-touch, without using a bolt etc. In addition, in removing this cassette field 135, the installation procedure mentioned above and a reverse procedure are made to perform.

[0197] In addition, the guide of a couple shown in drawing by 156 is arranged in the position which sandwiches the soffit of the above-mentioned sticking-by-pressure section 122a of the above-mentioned sticking-by-pressure tool 122. It is fixed to the above-mentioned vertical guide plate 118 (not shown), and crosswise [ of the above-mentioned pad 132 ], the guide 156 of this couple covers an overall length, and is constructed.

[0198] Moreover, the guide 156 of this couple is located in the height shown in drawing irrespective of the upper and lower sides of the above-mentioned sticking-by-pressure tool 122. At the time of installation of this cassette field, the pad 132 stretched between the medial-axis members 137 of the above-mentioned cassette field 135 is caudad pulled out by the guide 156 of this couple, and is located in the bottom estranged in the predetermined dimension from the inferior surface of tongue of sticking-by-pressure section 122a of the above-mentioned sticking-by-pressure tool.

[0199] On the other hand, when this cassette field 135 is attached in the above-mentioned extension section 134 and the vertical guide plate 118, as shown in drawing 13, the proximity sensor shown in drawing by 145 approaches the tip section projected from the superficies of the above-mentioned end plate 136a of the above-mentioned insertion member 142. This proximity



sensor is attached in the soffit of the above-mentioned vertical guide plate 118 as shown in drawing 11 . And this proximity sensor 145 is connected to the aforementioned control section 47.

[0200] The above-mentioned control section 47 is operating the above-mentioned drive 147 intermittently, and rotates the above-mentioned winding side medial-axis member 137a a predetermined angle every. By this, the above-mentioned pad 132 is delivered from predetermined dimension [ every ] above-mentioned delivery side medial-axis member 137b, and is supplied to the soffit side of the above-mentioned press tool 122.

[0201] On the other hand, if the above-mentioned pad 132 lets all out from the above-mentioned delivery side core material and the tip section of the above-mentioned insertion member 142 is absorbed in the above-mentioned end plate 136a, that will detect with the above-mentioned proximity sensor 145. The above-mentioned control section 47 judges that the delivery of the above-mentioned pad 132 was completed based on this detecting signal, and it tells an operator about it by the alarm etc. while this equipment is stopped.

[0202] In addition, in order to remove the above-mentioned medial-axis member 137b from the above-mentioned cassette field 135, the pit of the above-mentioned insertion member 142 shown in drawing 13 is carried out to the energization force of the above-mentioned spring 143, it pulls in the orientation of the superficies of the above-mentioned end plate 136a, and the above-mentioned insertion section 142 material is drawn out from the above-mentioned medial-axis member 137b.

[0203] By this, since it dissociates with the above-mentioned end plate, the other end of the above-mentioned delivery side medial-axis member 137 can remove this medial-axis member from the above-mentioned case. By this, the above-mentioned medial-axis member 137 around which the new buffer member 132 was wound can be attached in this cassette field 135.

[0204] Next, the sticking-by-pressure operation by the above-mentioned sticking-by-pressure tool 122 is explained.

[0205] As shown in drawing 10 (a), the opposite positioning of the above-mentioned sticking-by-pressure tool 122 is carried out at piece of anisotropy electric conduction layer 4' with which it was equipped on liquid crystal glass-substrate 2a of the above 1st. Subsequently, while the down drive of this sticking-by-pressure tool 122 is carried out, the temperature up of it is carried out to predetermined temperature [ operate / the above-mentioned heating heater 131 ].

[0206] By this, this sticking-by-pressure tool 122 carries out the heating press of above-mentioned piece of anisotropy electric conduction layer 4' to glass-substrate 2a of the above 1st through the above-mentioned pad 132 and release-paper 6a of the above 1st, and sticks this piece of anisotropy electric conduction layer 4' to liquid crystal glass-substrate 2a of the above 1st by pressure (attachment).

[0207] Next, a means to exfoliate release-paper 6a of the above 1st from piece of anisotropy electric conduction layer 4' which does in this way and was stuck on the liquid crystal glass substrate of the above 1st is explained.

[0208] The above-mentioned clamp device 91 performs sublation of release-paper 6a of the above 1st. That is, as mentioned above, the chuck 92 of the couple of this clamp device 91 is located in the upper and lower sides which sandwich release-paper 6a of the above 1st in the outside of the above-mentioned attachment position A in a usual case, and invades in the above-mentioned attachment position A if needed, and carries out a both-way drive along with release-paper 6a of the above 1st.

[0209] Therefore, it can raise in the orientation which estranges release-paper 6a of the above 1st to the upper part by raising the above-mentioned vertical move plate 34 from above-mentioned piece of anisotropy electric conduction layer 4' by the chuck 92 located in the bottom among the chucks 92 and 92 of the above-mentioned couple. And in the status, by moving the above-mentioned chuck 92 in the orientation which invades in attachment position A, it exfoliates one by one and the thing of the release-paper 6a of the above 1st can be carried out from above-mentioned piece of anisotropy electric conduction layer 4'.

[0210] Thus, 1st release-paper 6a which exfoliated from above-mentioned piece of anisotropy electric conduction layer 4' is sending according to the above-mentioned clamp device 91, and driving, is discharged from this attachment position A one by one, and is rolled round one by one by the winder style 158 (shown in drawing 2) prepared in this vertical move plate 34.

[0211] Next, this winder style 158 is explained with reference to drawing 2.

[0212] After 1st release-paper 6a discharged from the above-mentioned attachment position A passes the 2nd guide idler 103 mentioned above, it is guided upward by the 3rd and the 4th guide idler 159 and 160. The guide slot for guidance in which the device for a positioning [ like the above 1st and the 2nd guide idler 103 in addition ] whose this 3rd [ the ] and 4th guide idler 159 and 160 are was not prepared, but width of face was prepared uniformly is only prepared.

[0213] After \*\*\*\*ing this 3rd [ the ] and 1st release-paper 6a which passed the 4th guide idler 159 and 160 on the roller 161 of the octavus, with the 9th roller 162, it is downward reversed and it is wound around the 10th roller 163 bottom.

[0214] In addition, this 10th roller 163 is energized downward (orientation which gives a tension to release-paper 6a of the above 1st) by the 3rd weight shown in drawing by 165 while it is held possible [ a vertical move into the 3rd slit 164 prepared in the front face of the above-mentioned vertical move plate 34 ] as well as the 1st roller 37 and the 5th roller 45 which were mentioned above.

[0215] And it is prepared in this the 3rd upper-limit section (1st position) and soffit section (2nd position) of a slit 164 face to face, and the upper-limit section sensor 166 and the soffit section sensor 167 which detect the 10th above-mentioned roller 163 are arranged by this 3rd slit 164.

[0216] After release-paper 6a of the above 1st passes this 10th roller 163, it is rolled round to the 1st release-paper take-up reel 168 prepared in the upper part of the above-mentioned vertical move plate 34. With the 3rd drive motor 169 fixed to the above-mentioned vertical move plate 34, the rotation drive of this 1st release-paper rolling-up take-up reel 168 is carried out, and it rolls round release-paper 6a of the above 1st one by one.

[0217] In addition, while this 3rd drive motor 169 operates by the command from the above-mentioned control section 47 based on the detecting signal from the above-mentioned upper-limit section sensor 166 and the soffit section sensor 167, when not operating like the 1st which drives the supply reel 35 mentioned above and the 2nd release-paper take up reel 46, and the 2nd drive motor 48 and 49, it holds the release-paper take up reel 168 of the above 1st to the rotation impotentia.

[0218] Next, the above-mentioned anisotropy electric conduction layer 4 by this control section 47 and the above 1st, delivery of the 2nd release paper 6a and 6b, and a control of a winding operation are explained with reference to drawing 15 (a) and (b).

[0219] In case the above-mentioned anisotropy electric conduction layer 4 and the 1st, and the 2nd release paper 6a and 6b are sent and driven, the above-mentioned clamp equipment 91 operates and the chuck 92 of the above-mentioned couple is made to invade into the above-mentioned attachment position A, as shown in drawing 15 (a), as mentioned above. And release-paper 6a of the above 1st is clamped by this chuck 92, and the predetermined dimension delivery drive of this 1st release-paper 6a is carried out by moving in the orientation shown in drawing by the arrow head.

[0220] At this time, the 1st drive motor 48 which drives the above-mentioned supply reel 35 has stopped, and the above-mentioned supply reel 35 is held at the rotation impotentia. Therefore, if release-paper 6a of the above 1st sends and drives according to the above-mentioned clamp device 91, the 1st above-mentioned roller 37 will be pulled downward by such tension at release-paper 6a of the above 1st, and as the energization force above [ by the 1st above-mentioned weight 39 ] is resisted and it is shown in this drawing (b), it will down.

[0221] Moreover, at this time, the 2nd which drives the 1st and 2nd release-paper take up reel 168 and 46, and the 3rd drive motor 49, 169 have also stopped, and the above 1st and the 2nd release-paper take up reel 168 and 46 are held at the rotation impotentia. Therefore, if release-paper 6a of the above 1st sends and drives, as shown in this drawing (b), it will prevent that the

5th above-mentioned roller 43 and the 10th roller 163 down with the weight of the above 2nd and the 3rd weight 51,165, and bending produces them in the above 2nd and the 1st release paper 6a and 6b.

[0222] By this, when the 1st above-mentioned roller 37, the 5th roller 43, and the 10th roller 163 down even to the position (the 2nd position) of the soffit section sensor 53,167, the above-mentioned control section 47 The above 1st - the 3rd drive motor 48 and 49,169 are operated, respectively. In the above-mentioned anisotropy electric conduction layer 4 and the 1st, and the delivery orientation of the 2nd release paper 6a and 6b, the release-paper take-up reel 46 of the above 2nd is driven in the rolling-up orientation of release-paper 6b of the above 2nd, and the release-paper take-up reel 168 of the above 1st is driven for the above-mentioned supply reel 35 in the rolling-up orientation of release-paper 6a of the above 1st.

[0223] By this, the 1st above-mentioned roller 37 goes up according to the energization force of the 1st above-mentioned weight 39, and the 5th and the 10th roller 43,163 resist the above 2nd and the energization force of the 3rd weight 51,165 according to the above 2nd and the 1st release paper 6b and 6a being rolled round, and are driven upward.

[0224] If the above 1st, the 5th, and the 10th roller 37 and 43,163 return to the height (the 1st position) of each upper-limit section sensor 52,166 by this, the above-mentioned control section will stop the above 1st - the 3rd drive motor 48 and 49,169 by the detecting signal from this upper-limit section sensor 52,166.

[0225] By this, the above-mentioned anisotropy electric conduction layer 4 and the 1st, and the 2nd release paper 6a and 6b are sent and driven in the status that the predetermined tension has always started.

[0226] Next, the inversion device 17 established between this 1st piece attachment device 14 of an anisotropy electric conduction layer and the piece attachment device 15 of an anisotropy electric conduction layer of the above 2nd is explained based on drawing 1.

[0227] This inversion device 17 is formed in the whole surface by the side of the above-mentioned X guide rail 27 of the Z mechanical component 171 set up on the above-mentioned pedestal 10, and this Z mechanical component 171 along with a Z direction, has the \*\*\*\* guide slot 172, and is attached in this guide slot 172 free [ a vertical slide of the inversion head 173 ].

[0228] This inversion head 173 extends at a level with the above-mentioned X guide-rail 28 side, and has the T character chuck 174 of the couple prepared in the vertical orientation free [ opening and closing ]. while this T character chuck 174 can support the above-mentioned liquid crystal cell 2, 180 degrees rotates to the circumference of a level axis -- this liquid crystal cell 2 - inversion (it turns over) -- things have come be made

[0229] Next, the 2nd piece attachment device 15 of an anisotropy electric conduction layer which sticks piece of anisotropy electric conduction layer 4' on 2nd liquid crystal glass-substrate 2b of the above-mentioned liquid crystal cell 2 is explained. in addition, this device 15 -- the anisotropy electric conduction layer attachment device 14 of the above 1st, and abbreviation -- since it has the same configuration, the same sign is given to the same component and the explanation is omitted

[0230] Along with Y sides (Y1) of 2nd liquid crystal glass-substrate 2b of the liquid crystal cell 2 supplied to the above and 2nd anisotropy electric conduction layer attachment position B (henceforth "attachment position B"), as shown in drawing 29, this 2nd piece attachment device 15 of an anisotropy electric conduction layer It is the device which sticks partially at a time two or more one piece of anisotropy electric conduction layer 4' shorter than piece of anisotropy electric conduction layer 4' stuck on liquid crystal glass-substrate 2a of the above 1st.

[0231] Therefore, as compared with the anisotropy electric conduction layer attachment device 14 of the above 1st, the configuration of the attachment section 113 which sticks above-mentioned piece of anisotropy electric conduction layer 4' on liquid crystal glass-substrate 2a of the above 2nd is short a little crosswise.

[0232] Moreover, arrangement of each device prepared in this 2nd anisotropy electric conduction layer attachment device 15 is arrangement of each device of the anisotropy electric conduction

layer attachment device 14 of the above 1st with the right-and-left selfish difference on the relation of space. Therefore, unlike the piece attachment device 14 of an anisotropy electric conduction layer of the above 1st, the above-mentioned anisotropy electric conduction layer 4 and 1st release-paper 6a are sent to the left from the space top right.

[0233] Furthermore, since this 2nd anisotropy electric conduction layer attachment device 15 is a device which sticks partially above-mentioned piece of anisotropy electric conduction layer 4', the 2nd backup 9 which the above-mentioned attachment position B is prepared caudad, and holds the inferior surface of tongue of liquid crystal glass-substrate 2b of the above 2nd is short formed as compared with the 1st bank rise 8 by which the length of a upper-limit attaching part was prepared in the piece attachment equipment 14 of an anisotropy electric conduction layer of the above 1st.

[0234] In addition, other configurations are completely the same as the configuration of the piece attachment device 14 of an anisotropy electric conduction layer of the above 1st shown in drawing 2. The anisotropy electric conduction layer 4 which possessed the vertical move plate 34 and it let out from the above-mentioned supply reel 35 in the status that it held to release-paper 6a of the above 1st. The cutting-machine style 54 cuts to piece of anisotropy electric conduction layer 4' of the shape of a short strip of paper, and this is stuck on Y pieces (Y1) of liquid crystal glass-substrate 2a of the above 2nd one by one.

[0235] Moreover, on the above-mentioned pedestal 10 corresponding to the other end of the above-mentioned X guide rail 28, the above-mentioned cell issue device 18 is established. Next, this cell issue device 18 is explained.

[0236] As shown in drawing 1, this cell issue device 18 possesses the X mechanical component 176, and the issue head 177 is formed in this X mechanical component 176. This issue head 177 has the T character issue chuck 178 of the couple prepared in the vertical orientation free [ opening and closing ].

[0237] Therefore, this issue head 177 can support the above-mentioned liquid crystal cell 2 using the above-mentioned issue chuck 178, and the above-mentioned liquid crystal cell 2 can be discharged now from this equipment by driving in the orientation of X by the X mechanical component 176.

[0238] Next, an operation of this piece attachment equipment of an anisotropy electric conduction layer is explained with reference to the flowchart shown in the general drawing showing in drawing 1, the drawing 16, and the drawing 17, and process drawing shown in drawing 18 - view 23.

[0239] First, the above-mentioned cell stage 13 is driving above-mentioned X-Y table 29 along with the X guide rail 28, and the position (cell supply position) which counters the above-mentioned liquid crystal cell feed zone 11 is made to stop the above-mentioned adsorption arm 31, as shown in the flowchart of drawing 16.

[0240] The above-mentioned liquid crystal cell feed zone 11 is supplied on the adsorption arm 31 of the above-mentioned cell stage 13 by the operation which already described the liquid crystal cell 2 on which piece of anisotropy electric conduction layer 4' is not yet stuck.

[0241] After this cell stage 13 carries out the adsorption hold of the above-mentioned liquid crystal cell 2 on the above-mentioned adsorption arm 31, it drives above-mentioned X-Y table 29 along with the above-mentioned X guide rail 28, and transports it to the position (cell recognition position) where the above-mentioned liquid crystal cell 2 was formed in the above-mentioned image pck-up camera 27.

[0242] In this cell recognition position, the + mark for 2 positionings 7 ( drawing 29 ) prepared in the 1st both ends of X sides (X1) of 1st liquid crystal glass-substrate 2a of the above-mentioned liquid crystal cell 2 is made to counter the above-mentioned image pck-up camera 27, respectively, and this is recognized.

[0243] A control section 47 operates the above-mentioned cell stage 13 based on the recognition signal from this image pck-up camera 27, and is positioned on the 1st backup 8 in which X sides (X1) of liquid crystal glass-substrate 2a of the above 1st were prepared by anisotropy electric

conduction layer attachment position A of the above 1st. The elevation drive of this 1st backup 8 is carried out, and it holds the inferior surface of tongue of liquid crystal glass-substrate 2a of the above 1st in respect of a upper limit. (Status shown in drawing 18 (a)) Next, the operation which sticks above-mentioned piece of anisotropy electric conduction layer 4' on the 1st X side (X1) of 1st liquid crystal glass-substrate 2a positioned by this 1st anisotropy electric conduction layer attachment position A is explained based on the flowchart of process drawing shown in drawing 19 (A) - view 23 (J), and the drawing 16.

[0244] As shown in drawing 19 (A), the above-mentioned anisotropy electric conduction layer 4 is cut at above-mentioned cutting-machine guard 54 by piece of anisotropy electric conduction layer 4' for every predetermined dimension, is that release-paper 6a of the above 1st sends intermittently, and drives for every predetermined dimension, and is sent to the position corresponding to the above-mentioned adsorption nozzle 90.

[0245] As shown in this drawing (A) and (B), unnecessary piece of anisotropy electric conduction layer 4', like a length dimension is insufficient among piece of anisotropy electric conduction layer 4' held at release-paper 6a which is the above 1st exfoliates from release-paper 6a of the above 1st according to the anisotropy electric conduction layer sublation device 94 prepared in this position, and is removed. By this, "search" of piece of anisotropy electric conduction layer 4' stuck on liquid crystal glass-substrate 2a of the above 1st is made.

[0246] If "search" accomplishes, this piece of anisotropy electric conduction layer 4' is supplied to the above-mentioned attachment position A, as shown in drawing 20 (C) by release-paper 6a of the above 1st sending and driving, and makes an adhesive face counter liquid crystal glass-substrate 2a of the above 1st.

[0247] When the above-mentioned clamp device 91 (chuck 92) detects the break of above-mentioned piece of anisotropy electric conduction layer 4' by Mr. above-mentioned break sensor 9, it stops delivery of this 1st release-paper 6a, and it positions the feed direction of above-mentioned piece of anisotropy electric conduction layer 4'.

[0248] A positioning is made so that a how [ to send piece of anisotropy electric conduction layer 4' in the above-mentioned attachment position A by this ] Kogo edge may be in agreement with the end face of insertion section 119a of the above-mentioned insertion tool 119.

[0249] and the 1st of the couple for the above-mentioned positioning in this status and the 2nd guide idler 103 and 103 -- the account of a top -- it operates on both sides which sandwiched this attachment position A, and the positioning hold of piece of high order anisotropy electric conduction layer 4' and the 1st release-paper 6a is carried out

[0250] Subsequently, as shown in this drawing (D), the down drive of the above-mentioned insertion tool 119 is carried out, and it carries out the adsorption hold of this while the soffit side of insertion section 119a is made to contact the top of 1st release-paper 6a holding above-mentioned piece of anisotropy electric conduction layer 4'.

[0251] And the adsorption posture of this piece of anisotropy electric conduction layer 4' is rectified by the positioning device 127 operating and making the above-mentioned contact field 129 contact the cross direction 1 side of piece of anisotropy electric conduction layer 4' by which the adsorption hold was carried out in this status.

[0252] Next, as shown in drawing 21 (E), the down drive of the vertical mobile 34 above-mentioned whole holding the above-mentioned insertion tool 119, the above-mentioned cutting-machine style 54, etc. is carried out, and the above-mentioned insertion tool 119 equips the 1st X side (X1) of liquid crystal glass-substrate 2a of the above 1st with above-mentioned piece of anisotropy electric conduction layer 4'.

[0253] If insertion of this piece of anisotropy electric conduction layer 4' is performed, the above-mentioned vertical move plate 34 will be held with the height, and the elevation drive only of the above-mentioned insertion tool 119 will be carried out. And as shown in this drawing (F), the opposite positioning of the sticking-by-pressure tool 122 is carried out in the upper part of piece of anisotropy electric conduction layer 4' with which it was equipped.

[0254] Subsequently, as shown in drawing 22 (G), the down drive of this sticking-by-pressure

tool 122 is carried out, it is heated while it pushes piece of anisotropy electric conduction layer 4' against liquid crystal glass-substrate 2a of the above 1st in respect of the soffit of the above-mentioned sticking-by-pressure section 122a, and it sticks this piece of anisotropy electric conduction layer 4' to this 1st liquid crystal glass-substrate 2a by pressure (attachment). In addition, in this drawing, the publication of the above-mentioned pad feeder style 133 and the pad 132 which were mentioned above is omitted for convenience.

[0255] If sticking by pressure of this piece of anisotropy electric conduction layer 4' is completed, while the elevation drive of the above-mentioned sticking-by-pressure tool 122 is carried out, the elevation drive also of the above-mentioned vertical move plate 34 will be carried out. Release-paper 6a of the above 1st which held piece of anisotropy electric conduction layer 4' stuck on liquid crystal glass-substrate 2a of the above 1st by this will be pulled upward by the chuck 92 of the above-mentioned adsorption nozzle 90 and the above-mentioned clamp device 91.

[0256] Subsequently, as shown in drawing 23 (I), the chuck 92 of the above-mentioned clamp device 91 can be made to be able to invade between the above-mentioned sticking-by-pressure tool 122 and 1st liquid crystal glass-substrate 2a, and release-paper 6a of the above 1st can be exfoliated from above-mentioned piece of anisotropy electric conduction layer 4' by the chuck 92 located in the bottom of the chucks 92 of the above-mentioned couple by making it move to a delivery side along with release-paper 6a of the above 1st.

[0257] in addition -- this -- working -- the above -- adsorption -- a nozzle -- 90 -- the above -- the -- one -- a release paper -- six -- a -- a top -- adsorption -- a hold -- carrying out -- \*\*\*\* -- the above -- a disconnection -- carrying out -- having had -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- a feed direction -- a position -- a gap -- being generated -- things -- preventing -- \*\*\*\* .

[0258] If sublation of release-paper 6a of the above 1st is completed as shown in this drawing (J), it once stops in the center section of this attachment position A, and the above-mentioned chuck 92 will support release-paper 6a of the above 1st, and will send and drive this. In addition, adsorption by the above-mentioned adsorption nozzle 90 is canceled in the case of this delivery drive, and the delivery drive of the release-paper 6a of the above 1st is carried out smoothly.

[0259] As shown in drawing 18 (a), above-mentioned piece of anisotropy electric conduction layer 4' is stuck on the 1st X side (X1) of liquid crystal glass-substrate 2a of the above 1st by such a series of operation.

[0260] If the attachment to the 1st X side (X1) of liquid crystal glass-substrate 2a of the above 1st of above-mentioned piece of anisotropy electric conduction layer 4' by the above-mentioned insertion tool 119 and the sticking-by-pressure tool 122 is completed as shown in the flowchart of drawing 16 , X-Y table 29 of the above-mentioned cell stage 13 operates in the orientation of Y, and makes this liquid crystal cell 2 leave the above-mentioned attachment position A.

[0261] The above-mentioned cell stage 13 will rotate 180 degrees of this liquid crystal cell 2 in a level surface, if this liquid crystal cell 2 is made to leave even in the position (cell rotation position) which can be rotated in a level surface.

[0262] Subsequently, again, this cell stage 13 transports the above-mentioned liquid crystal cell to the above-mentioned position recognition position, and the image pck-up recognition of the + mark for a positioning 7 prepared in X pieces (X2) of 2nd both ends of liquid crystal glass-substrate 2a of the above 1st is shortly carried out with the image pck-up camera 27 one by one. This cell stage 13 positions the 2nd X side (X2) of liquid crystal glass-substrate 2a of the above 1st to the above-mentioned attachment position A based on the recognition by this image pck-up camera 27. (Status shown in drawing 18 (b))

The anisotropy electric conduction layer attachment device 14 of the above 1st makes above-mentioned piece of anisotropy electric conduction layer 4' stick like X pieces (X1) of the above 1st of cases also to the 2nd [ this ] X side (X2) using the above-mentioned insertion tool 119 and the sticking-by-pressure tool 122. (Operation of [ain flowchart])

thus -- the above -- the -- one -- liquid crystal -- a glass substrate -- two -- a -- the -- one -- the --

two -- X -- a side (X1 and X2) -- receiving -- the above -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- attachment -- all -- having ended -- if -- the above -- a cell -- a stage -- 13 -- the above -- a liquid crystal cell -- two -- the above -- inversion -- a device -- 17 -- countering -- a position

[0263] The liquid crystal cell 2 transported to this inversion position is inserted by the above-mentioned cell stage 13 between the T character chucks 174 of the couple of the above-mentioned inversion device 17, as shown in drawing 18 (c). Subsequently, while this inversion device 17 closed-drives the above-mentioned T character chuck 174, vacuum adsorption of it is carried out, and it supports the above-mentioned liquid crystal cell 2. Subsequently, the inversion device 17 raises this liquid crystal cell 2 from the above-mentioned cell stage 13 by carrying out the elevation drive of this T character chuck 177, and is made to estrange it upwards from the above-mentioned adsorption arm 31.

[0264] The above-mentioned cell inversion device 17 reverses the above-mentioned T character chuck 177 in the place which carried out the specified quantity elevation of the above-mentioned liquid crystal cell 2, and as shown in drawing 18 (d), it holds the above-mentioned liquid crystal cell 2 inside out and horizontally. Subsequently, this liquid crystal cell 2 turned over is delivered on the adsorption arm 31 of the above-mentioned cell stage 13 by dropping the above-mentioned T character chuck 177 again.

[0265] If the T character chuck 177 of the above-mentioned couple is opened, as shown in the flowchart of drawing 17, the above-mentioned cell stage 13 makes the above-mentioned liquid crystal cell 2 leave this inversion position, and locates this liquid crystal cell 2 in the position (rotation position) which can be rotated in a level surface.

[0266] Subsequently, this cell stage 13 rotates the 90 degrees of the above-mentioned liquid crystal cells 2 in a level surface. This liquid crystal cell 2 that rotated 90 degrees is transported to the above-mentioned position recognition position by the above-mentioned cell stage 13.

[0267] The above-mentioned cell stage 13 is made to counter the image pck-up camera 27 one by one, and carries out the image pck-up recognition of the + mark for a positioning 7 prepared in the both ends of Y sides (Y1) of liquid crystal glass-substrate 2b of the above 2nd in this position recognition position.

[0268] The above-mentioned cell stage 13 is transported to 2nd anisotropy electric conduction layer attachment position B by which the above-mentioned liquid crystal cell 2 was formed in the piece attachment device 15 of an anisotropy electric conduction layer of the above 2nd based on the recognition signal from this image pck-up camera 27. (Status shown in drawing 18 (e)) Since this 2nd anisotropy electric conduction layer attachment device 15 is equipment which sticks partially above-mentioned piece of anisotropy electric conduction layer 4', the above-mentioned cell stage 13 positions the position which sticks above-mentioned piece of anisotropy electric conduction layer 4' on the beginning among Y sides (Y1) of 2nd liquid crystal glass-substrate 2b which constitutes the above-mentioned liquid crystal cell 2 to the upper part of the 2nd backup 9.

[0269] Subsequently, this 2nd anisotropy electric conduction layer attachment device 15 is stuck on Y sides (Y1) of liquid crystal glass-substrate 2b of the above-mentioned piece of anisotropy electric conduction layer 4' above 2nd using the above-mentioned insertion tool 119 and the sticking-by-pressure tool 122 by the same operation (shown in drawing 19 (A) - view 23 (J)) as the piece attachment device 14 of an anisotropy electric conduction layer of the above 1st.

[0270] Thus, if the first piece of anisotropy electric conduction layer 4' is stuck on the predetermined site of Y sides (Y1) of this 2nd liquid crystal glass-substrate 2b, the above-mentioned cell stage 13 shifts liquid crystal glass-substrate 2a of the above 2nd on the 2nd above-mentioned backup 9, and locates in the upper part of the 2nd above-mentioned backup 9 the site which next sticks piece of anisotropy electric conduction layer 4'.

[0271] Subsequently, the anisotropy electric conduction layer attachment device 15 of the above 2nd sticks above-mentioned piece of anisotropy electric conduction layer 4' on the site. The above-mentioned cell stage 13 and the anisotropy electric conduction layer attachment device 15



of the above 2nd shift the position of the 2nd above-mentioned liquid crystal cell, perform the same operation twice more, and as shown in drawing 18 (f), they stick piece of anisotropy electric conduction layer of four pieces 4' along with these Y sides (Y1).

[0272] Thus, if attachment of piece of anisotropy electric conduction layer 4' to 2nd liquid crystal glass-substrate 2b of the above-mentioned liquid crystal cell 2 is completed, the above-mentioned cell stage 13 is made to leave to the position (rotation position) which can rotate the above-mentioned liquid crystal cell 2 in a level surface.

[0273] This cell stage 13 transports this liquid crystal cell 2 to the position (cell issue position) which counters the above-mentioned cell issue device 18, after rotating the 90 degrees of the above-mentioned liquid crystal cells in this rotation position.

[0274] The above-mentioned cell stage 13 stops the above-mentioned liquid crystal cell 2 between the issue chucks 178 of the couple of this cell issue device 18. After the above-mentioned cell issue device 18 closed-drives the above-mentioned issue chuck 178 of T characters and supports this liquid crystal cell 2, it is driving the above-mentioned issue head 177 in the orientation of X, and discharges the above-mentioned liquid crystal cell 2 from this piece attachment equipment of an anisotropy electric conduction layer.

[0275] The discharged liquid crystal cell 2 delivers the TAB parts 1 to this liquid crystal cell 2 at the package equipment which carries out temporary sticking by pressure and actual sticking by pressure. Moreover, it moves to the supply position which counters the above-mentioned cell feed zone 11, and the cell stage 13 after delivering the above-mentioned liquid crystal cell 2 to the above-mentioned cell issue device 18 receives a liquid crystal cell 2 again.

[0276] According to such a configuration, it is effective in explaining below.

[0277] The 1st of the couple which constitutes the liquid crystal cell 2 for simple matrix liquid crystal panels in the 1st, 2nd liquid crystal glass-substrate 2a, The work which takes out a liquid crystal cell 2 and carries out the conveyance positioning of the work which sticks piece of anisotropy electric conduction layer 4' on each of the opposite side of 2b from the above-mentioned magazine 21, Work a long picture -- the tape-like anisotropy electric conduction layer 4 is cut for every predetermined dimension, and piece of anisotropy electric conduction layer 4' is formed -- The work which exfoliates piece of anisotropy electric conduction layer 4' stuck on the above 1st or the 2nd liquid crystal glass substrate 2a and 2b to release-paper 6a, and both liquid crystal glass-substrate 2a, In order to stick above-mentioned piece of anisotropy electric conduction layer 4' on 2b, it is possible for it to be continuous and full automatic and to perform all work required for attachment of above-mentioned piece of anisotropy electric conduction layer 4' including the work which reverses the above-mentioned liquid crystal cell 2.

[0278] That is, it is \*\* which performed these work with the help conventionally in order to require detailed and special technique, or was being performed with manual equipment. For this reason, while the productivity of a product was bad, it might become the cause which dust etc. adheres to the adhesive face of the anisotropy electric conduction layer 4, and produces a faulty connection.

[0279] Since a series of work [ all ] is automatable, while the productivity of a product improves according to this invention, it is enabled to lose a faulty connection etc. and to manufacture the good liquid crystal panel of a quality.

[0280] Let out the above-mentioned anisotropy electric conduction layer 4 and the 1st, and the 2nd release paper 6a and 6b ("henceforth an anisotropy electric conduction layer etc.") to the 2nd, and as a means to roll round The 1st, the 5th, and the 10th roller 37 and 43,163 which can move up and down are formed. While weight 39 and 51,165 is connected to this 1st [ the ], the 5th, and the 10th roller 37 and 43,163, respectively and the suitable tension for the above-mentioned anisotropy electric conduction layer etc. is hung Based on detecting the position of this 1st [ the ], the 5th, and the 10th roller 37 and 43,163 by the upper-limit section sensor 52,166 and the soffit section sensor 53,167, it lets out the above-mentioned anisotropy electric conduction layer etc. from the above-mentioned supply reel 35. The above 1st and the 2nd release paper 6a and 6b were rolled round by the above 1st and the 2nd release-paper take up reel



168 and 46.

[0281] In order to prevent that a position gap of a feed direction arises on the above-mentioned anisotropy electric conduction layer etc. conventionally, means to fix to a hand of cut the supply reel which carries out the winding receipt of this anisotropy electric conduction layer etc. were taken.

[0282] However, since such a tension is changed on this anisotropy electric conduction layer etc. at the process of pulling out and sticking the above-mentioned anisotropy electric conduction layer 4 by this technique, and exfoliating release-paper 6a of the above 1st, The disconnection position (dimension of piece of anisotropy electric conduction layer 4') by the cutting-machine style 54 and the attachment position to the above-mentioned liquid crystal glass substrates 2a and 2b might say that the anisotropy electric conduction layer 4 with which width of face in recent years tends to be extended thinly shifted to a feed direction about  $\pm 3$ mm by the maximum by this.

[0283] However, this tension can be maintained, in case it lets out an anisotropy electric conduction layer etc. from the above-mentioned supply reel 35 between the above-mentioned supply reel 35 and the above-mentioned adsorption nozzle 90 according to this invention, while the set-up hold of the above-mentioned anisotropy electric conduction layer 4 and the 1st, and the 2nd release paper 6a and 6b can always be carried out by the fixed tension.

[0284] Therefore, since it can stretch, without slacking the anisotropy electric conduction layer 4 with which width of face tends to be extended thinly, it is enabled to be able to cut this anisotropy electric conduction layer 4 correctly, and to manufacture good piece of anisotropy electric conduction layer 4' of a dimensional accuracy.

[0285] Moreover, before supplying the above-mentioned attachment positions A and B, hold fixation of piece of anisotropy electric conduction layer 4' which does in this way and was manufactured is once carried out with the above-mentioned adsorption nozzle 90. Therefore, it is rare to produce a position gap of the length orientation, before supplying the above-mentioned attachment positions A and B, since it is not influenced of attachment / sublation operation in the above-mentioned attachment positions A and B, and it has the effect which can stick this piece of anisotropy electric conduction layer 4' with high precision.

[0286] To the 3rd, this equipment crosswise above-mentioned piece of anisotropy electric conduction layer 4' as a guide device which carries out a positioning guide in the attachment positions A and B The guide idler 103 of the couple which has the guide slot 111 in a periphery side, and can change the width of face of this guide slot 111, the above -- insertion -- a tool -- 119 -- preparing -- having -- contact -- the field -- 129 -- the above -- insertion -- a tool -- 119 -- insertion -- the section -- 119 -- a -- a soffit -- a field -- adsorption -- a hold -- carrying out -- having had -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- the cross direction -- one -- a side -- contacting -- making -- a positioning -- a device -- 127 -- having provided .

[0287] The conventional guide device was what cannot change width of face of a guide slot. For this reason, the gap of the cross direction for the opening produced between the above-mentioned guide slot and the anisotropy electric conduction layer 4 in piece of anisotropy electric conduction layer 4' supplied to the above-mentioned attachment positions A and B had arisen. moreover, the time of positioning, since the above-mentioned anisotropy electric conduction layer 4 has thin width of face -- it can twist -- etc. -- it might position by having been generated and might be called \*\*\*\*\*

[0288] However, since it enabled it to support the above-mentioned piece 4 of an anisotropy electric conduction layer, and 1st release-paper 6a in the guide slot 111 which can change width of face crosswise according to this invention, the set-up hold of this piece 4 of an anisotropy electric conduction layer can be first carried out in the status that it positioned crosswise in the above-mentioned attachment positions A and B.

[0289] Moreover, since it was made to carry out the adsorption hold of above-mentioned piece of anisotropy electric conduction layer 4' in the soffit side of the above-mentioned insertion tool

119, in case the liquid crystal glass substrates 2a and 2b are equipped, it can prevent effectively that release-paper 6a of the above 1st and piece of anisotropy electric conduction layer 4' twist. [0290] And since it was made to make the above-mentioned contact field 129 contact the cross direction 1 side of piece of anisotropy electric conduction layer 4' by which the adsorption hold was carried out by doing in this way, above-mentioned piece of anisotropy electric conduction layer 4' can be positioned crosswise with high precision. Therefore, there is an effect which can stick this piece of anisotropy electric conduction layer 4' with high precision.

[0291] The insertion tool 119 which this equipment carries out the adsorption hold of above-mentioned piece of anisotropy electric conduction layer 4' in a soffit side, and equips the 4th with this piece of anisotropy electric conduction layer 4' at the above-mentioned liquid crystal glass substrates 2a and 2b, The sticking-by-pressure tool 122 which sticks by pressure piece of anisotropy electric conduction layer 4' with which it was equipped by this insertion tool 119 to the above-mentioned liquid crystal glass substrates 2a and 2b is provided, and above-mentioned piece of anisotropy electric conduction layer 4' was stuck on the above-mentioned liquid crystal glass substrates 2a and 2b using these two tools 119 and 122.

[0292] Conventionally, above-mentioned piece of anisotropy electric conduction layer 4' is directly depressed with the above-mentioned sticking-by-pressure tool 122, and the technique of pressing and sticking on the above-mentioned liquid crystal glass substrates 2a and 2b was taken. However, if it is this technique, in case above-mentioned piece of anisotropy electric conduction layer 4' will be depressed, it may be said that this piece of anisotropy electric conduction layer 4' shifts crosswise.

[0293] Moreover, since above-mentioned piece of anisotropy electric conduction layer 4' would be pushed against the direct above-mentioned liquid crystal glass substrates 2a and 2b by the large pressure, it might be said that a gap of the cross direction arose by this in above-mentioned piece of anisotropy electric conduction layer 4'.

[0294] however -- having mentioned above -- a configuration -- depending -- if -- first -- the above -- insertion -- a tool -- 119 -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- adsorption -- a hold -- carrying out -- this -- having positioned -- the status -- liquid crystal -- a glass substrate -- two -- a -- two -- b -- having equipped -- after -- this -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- the sticking-by-pressure tool 122 -- being stuck by pressure -- having Therefore, there is an effect which can stick above-mentioned piece of anisotropy electric conduction layer 4' on the above-mentioned liquid crystal glass substrates 2a and 2b where a locating is carried out with high precision.

[0295] While this equipment holds the above-mentioned anisotropy electric conduction layer 4 by 1st release-paper 6a to the 5th, to it Leave release-paper 6a of the above 1st, and this anisotropy electric conduction layer 4 is cut to piece of anisotropy electric conduction layer 4' for every predetermined dimension. The above-mentioned piece of anisotropy electric conduction layer 6a was supplied to the above-mentioned attachment positions A and B by sending and driving this 1st release-paper 6a succeedingly, and after sticking this piece of anisotropy electric conduction layer 6a on the liquid crystal glass substrates 2a and 2b, it was made to exfoliate this 1st release-paper 6a from this piece of anisotropy electric conduction layer 4'.

[0296] The above-mentioned anisotropy electric conduction layer 4 might cause the faulty connection, when it was the member of double-sided tackiness, the handling was difficult and dust etc. adhered to the adhesive face.

[0297] However, according to the configuration mentioned above, a manufacture of above-mentioned piece of anisotropy electric conduction layer 4', attachment, and 1st release-paper 6a can be exfoliated by taking the technique of conveying above-mentioned piece of anisotropy electric conduction layer 4' by release-paper 6a of the above 1st, without holding the adhesive face of the above-mentioned anisotropy electric conduction layer 4. Therefore, this piece of anisotropy electric conduction layer 4' can be stuck good, and it can also lessen that a faulty connection etc. arises.

[0298] The cutting-machine style 54 which can adjust the path clearance and parallelism

between the plinths 71 which hold the disconnection blade 87 and the above-mentioned anisotropy electric conduction layer 4 which cut this anisotropy electric conduction layer 4 as a device for leaving 1st release-paper 6a and cutting the above-mentioned anisotropy electric conduction layer 4 to the 6th with high precision was formed.

[0299] When performing manufacture of above-mentioned piece of anisotropy electric conduction layer 4', conveyance, and attachment using release-paper 6a of the above 1st, unless it may be unable to cut to release-paper 6a of the above 1st or it may be unable to cut certainly the above-mentioned anisotropy electric conduction layer 4 on the contrary, this piece of anisotropy electric conduction layer 4' cannot be stuck good.

[0300] However, since the above-mentioned anisotropy electric conduction layer 4 can be certainly cut while it can prevent effectively cutting to release-paper 6a of the above 1st according to the configuration which was mentioned above, there is an effect which can stick certainly above-mentioned piece of anisotropy electric conduction layer 4' on the above-mentioned liquid crystal glass substrate.

[0301] The break sensor 93 which detects the break between this piece of anisotropy electric conduction layer 4' is arranged in the 7th, and it was made to make it stop delivery of this piece of anisotropy electric conduction layer 4' based on the detecting signal from this break sensor 93 as a means to position above-mentioned piece of anisotropy electric conduction layer 4' to the feed direction of this piece of anisotropy electric conduction layer 4'.

[0302] According to such a configuration, there is an effect which can stick above-mentioned piece of anisotropy electric conduction layer 4' with high precision to the above-mentioned liquid crystal glass substrates 2a and 2b.

[0303] At the octavus, between medial-axis member 137a of the couple in which the pad 132 which intervenes between the above-mentioned sticking-by-pressure tool 122 and piece of anisotropy electric conduction layer 4' was formed in the case 136, and b, the cassette field 135 come to enable the winding receipt of the delivery of was established, and this cassette field 135 was attached in the above-mentioned sticking-by-pressure tool 122 free [ attachment and detachment ]. Moreover, the drive 147 which sends and drives the pad 132 within this cassette field 135 was formed.

[0304] Furthermore, if the above-mentioned pad 137 was exhausted altogether, the proximity sensor 145 which detects \*\*\*\* of the vegetation edge of the insertion member 142 absorbed in the above-mentioned end plate 136a and this insertion member 142 was formed.

[0305] Between the above-mentioned sticking-by-pressure tool 122 and piece of anisotropy electric conduction layer 4', when impact is applied to above-mentioned piece of anisotropy electric conduction layer 4' with this sticking-by-pressure tool 122, this piece of anisotropy electric conduction layer 4' is crushed, and in order to prevent that the electric conduction grain mixed in this piece of anisotropy electric conduction layer 4' contacts and suits, the above-mentioned pad 132 intervenes.

[0306] This pad 132 has the need of exchanging to a new thing for every sticking-by-pressure operation of the number of times of predetermined, in order to become dirty gradually by repeating use.

[0307] Conventionally, hand control was performing insertion and exchange of this pad 132. However, since it is necessary to stop equipment to the degree of exchange of this pad 132 when carrying out manually in this way, it may be said that the productivity of a product cannot be raised. Moreover, since this sticking-by-pressure tool 122 became an elevated temperature (100 degrees C - 140 degrees C), it had a possibility of burning oneself in the case of exchange.

[0308] While the pad 132 new to the sticking-by-pressure side of the above-mentioned sticking-by-pressure tool 122 only by sending intermittently the pad 132 wound around the above-mentioned medial-axis member 137, and driving it could be supplied according to such a configuration, it was made to perform a drive of this medial-axis member 137 with the drive motor 149 formed in the above-mentioned drive 147 by being automatic.

[0309] It is effective in the ability to perform continuous operation, without stopping this

equipment until it exhausts the above-mentioned pad 132 by this, once setting the above-mentioned pad.

[0310] Moreover, when this pad 132 is exhausted, that can be known as an electrical signal from a proximity sensor 145. and drawing [ it / technique / as shown in drawing 11 / the desorption technique of this cassette field 135 leans this cassette field 135 aslant, and ]-out horizontally \*\*\*\* which carries out the desorption of the above-mentioned cassette field 135 at the time of exchange of the above-mentioned pad 132 while it accepts and comes out and it can carry out by one-touch -- since it can carry out by things, there is an effect which can be performed easily quickly, without the above-mentioned sticking-by-pressure tool's 122 getting exchange of the above-mentioned pad 132 cold

[0311] In order to supply piece of anisotropy electric conduction layer 4' to the above-mentioned attachment positions A and B, the adsorption nozzle 90 and the clamp device 91 are used, and it sends and was made to drive release-paper 6a of the above 1st to the 9th by operating these by turns.

[0312] And when it sent and release-paper 6a of the above 1st was not being supported by working and the above-mentioned clamp device 91 (unclamping), it was made to carry out the adsorption hold of the top of release-paper 6a of the above 1st with the above-mentioned adsorption nozzle 90.

[0313] Moreover, where the above-mentioned clamp device 91 is made unclamping, it was made to perform it, while the attachment operation of above-mentioned piece of anisotropy electric conduction layer 4' adsorbed the top of release-paper 6a of the above 1st with the above-mentioned adsorption nozzle 90.

[0314] As the above-mentioned anisotropy electric conduction layer 4 was mentioned above, width of face tends to be extended thinly. And if this piece of anisotropy electric conduction layer 4' is stuck or the operation which exfoliates 1st release-paper 6a from this piece of anisotropy electric conduction layer 4' is performed, since such tension will change to 1st release-paper 6a, It may be said that the positioning by which the piece 4 of an anisotropy electric conduction layer held by this 1st release-paper 6a and this 1st release-paper 6a covered the overall length, shifted to the feed direction, and was stabilized cannot be performed.

[0315] According to the configuration mentioned above, however, during attachment of the above-mentioned piece 4 of an anisotropy electric conduction layer, and a sublation operation of release-paper 6a of the above 1st Above-mentioned piece of anisotropy electric conduction layer 4' is fixed to a feed direction by carrying out the adsorption hold of the top of release-paper 6a of the above 1st with the above-mentioned adsorption nozzle 90. It was made to make the elongation made into how to produce in above-mentioned piece of anisotropy electric conduction layer 4', or 1st release-paper 6a absorb to a 1st release-paper 6a's after exfoliating from above-mentioned piece of anisotropy electric conduction layer 4' winding side.

[0316] Since it is enabled to stabilize the supply position of above-mentioned piece of anisotropy electric conduction layer 4' by this, this piece of anisotropy electric conduction layer 4' can be stuck with high precision. Moreover, it is the 2nd effect, and since the disconnection position by the above-mentioned cutting-machine style 54 is also stabilized as already stated, there is an effect which can supply piece of anisotropy electric conduction layer 4' of the stable dimension.

[0317] This equipment formed the piece sublation device 94 of an anisotropy electric conduction layer which carries out the sublation elimination of release-paper 6a of the above 1st to unnecessary piece of anisotropy electric conduction layer 4' beforehand in the 10th at the above-mentioned adsorption nozzle 54 bottom.

[0318] the above -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- the above -- liquid crystal -- a glass substrate -- two -- a -- two -- b -- attachment -- starting -- the time -- \*\*\*\* -- a length -- a dimension -- etc. -- being insufficient -- being unnecessary -- an anisotropy -- electric conduction -- a layer -- a piece -- four -- ' -- manufacturing -- having -- a case -- it is . Since this piece of anisotropy electric conduction layer 4' does not go to the reason of sticking on the above-mentioned liquid crystal glass substrates 2a and 2b, it removes this

unnecessary piece of anisotropy electric conduction layer 4' beforehand, and has the need of carrying out by required piece of anisotropy electric conduction layer 4' \*\*\*\*ing.

[0319] in order to remove such unnecessary piece of anisotropy electric conduction layer 4' conventionally, or it stops equipment and it carries out with a help -- the substrate of a dummy -- preparing -- the above -- it is made to remove unnecessary piece of anisotropy electric conduction layer 4' by sticking on the substrate of this dummy

[0320] However, by such technique, it might be said that it was required to stop equipment as it is as to insert the substrate of a dummy \*\*\*\* [ and ], and to perform tooling by the help, and continuous running of equipment was barred. [ exfoliating with a help ]

[0321] the time of starting operation of equipment according to the configuration mentioned above -- the above -- since the sublation elimination of unnecessary piece of anisotropy electric conduction layer 4' is carried out automatically and the head of required piece of anisotropy electric conduction layer 4' can be pulled out, it is effective in automatic and continuous running becoming possible

[0322] Moreover, this piece of poor anisotropy electric conduction layer 4' is removable in the same operation, and when piece of poor anisotropy electric conduction layer 4', like a length dimension is insufficient is manufactured, since it is not necessary to stop equipment also in this case, the effect that the productivity of a product can be raised is during equipment operation.

[0323] In addition, this invention can deform variously in the domain which is not limited to the one above-mentioned example and does not change the summary of invention.

[0324] Although the anisotropy electric conduction layer 4 was mentioned to the 1st as an adhesive tape in the one above-mentioned example, it is not limited to this.

[0325] You may be not the anisotropy electric conduction layer 4 but the adhesive member used in order to only fix parts for example, on a substrate.

[0326] Although the liquid crystal glass substrates 2a and 2b of a liquid crystal cell 2 were mentioned to the 2nd as a stuck member, it is not limited to this.

[0327] For example, when it mounts semiconductor electronic parts (flip chip) on a printed circuit board at a face down formula, above-mentioned piece of anisotropy electric conduction layer 4' may be used for the wiring pattern prepared in the electrode and the above-mentioned printed circuit board of these semiconductor electronic parts. In this case, you may apply this equipment to sticking piece of anisotropy electric conduction layer 4' on this printed circuit board.

[0328] In the one above-mentioned example, although it was the equipment which sticks piece of anisotropy electric conduction layer 4' on liquid crystal glass-substrate 2a and 2b side, it is not limited to the 3rd by this. A stuck member is used as the TAB parts 1 which are ICs for a liquid crystal drive, and it may be made to stick above-mentioned piece of anisotropy electric conduction layer 4' on the outer lead of this TAB part 1.

[0329] Since it was the equipment for manufacturing a simple matrix liquid crystal panel, although above-mentioned piece of anisotropy electric conduction layer 4' needed to be stuck on the both sides of the liquid crystal glass substrates 2a and 2b of the couple which constitutes a liquid crystal cell 2 in the one above-mentioned example the 4th, when manufacturing an active matrix liquid crystal panel, it is good with the configuration which sticks the piece of an anisotropy electric conduction layer only on one of substrates.

[0330] In this case, since there is no inversion (it turns over) need about the above-mentioned liquid crystal cell 2, the above-mentioned inversion device 17 does not need to be established.

[0331] Although two attachment devices, the above 1st and the 2nd anisotropy electric conduction layer attachment device 14 and 15, were provided in order to stick above-mentioned piece of anisotropy electric conduction layer 4' on the 5th by the section and to make it in the one above-mentioned example at Y sides (Y1) of liquid crystal glass-substrate 2b of the above 2nd, it is not limited to this.

[0332] When the above 1st and the 2nd liquid crystal glass substrate 2a and 2b are good at batch \*\*\*\*, you may be the configuration that only the anisotropy electric conduction layer attachment

device 14 of the above 1st is established.

[0333] As a device in which a tension is given to the 6th in the one above-mentioned example at the above-mentioned anisotropy electric conduction layer 4 and the 1st, and the 2nd release paper 6a and 6b Although the 1st which was mentioned above and in which a vertical move is possible, the 5th, and the 10th roller 37 and 43,163 are formed and this 1st [ the ], the 5th, and the 10th roller 37 and 43,163 were energized by the 1st - the 3rd weight 39 and 51,165, it is not limited to this.

[0334] For example, as shown in drawing 24 , you may be made to use the brake mechanism 180 which regulates directly rotation of the supply reel 35 (1st [ the ], 1st [ which roll round the 2nd release paper / the ], 2nd release-paper take up reel 46,168) which lets out the above-mentioned anisotropy electric conduction layer etc.

[0335] In addition, since the configuration of each brake mechanism 180 prepared in the above-mentioned reels 35 and 46,168 is the same, only the brake mechanism 180 prepared in the above-mentioned supply reel 35 is explained, and an explanation of the brake mechanism 180 prepared in other reels 46,168 is omitted.

[0336] This brake mechanism 180 is formed in the rear face of the above-mentioned vertical move plate 34 at a side, and consists of a reel for brakes 181 which fixed in driving shaft 35a of the above-mentioned supply reel 35, and a belt 182 wound around this reel for brakes 181 with predetermined tension.

[0337] Since brakes are applied to the above-mentioned supply reel 35 by the fixed frictional force produced between the above-mentioned reel for brakes 181, and the above-mentioned belt 182, a predetermined tension will be given to the anisotropy electric conduction layer 4 pulled out from the supply reel 35 and the 1st, and the 2nd release paper 6a and 6b. In addition, an operator shall set up the tension of the above-mentioned belt 182 arbitrarily.

[0338] Moreover, as shown in drawing 25 , it connects with rotation-axis 35a of the above-mentioned supply reel 35, and a predetermined tension may be made to give the anisotropy electric conduction layer 4 pulled out from the above-mentioned supply reel 35 and the 1st, and the 2nd release paper 6a and 6b by forming the constant-torque-load equipment equipment 184 which can generate constant torque by the adjustable formula.

[0339] Moreover, in the one above-mentioned example, although the above-mentioned pad had extended from the front-face side of the above-mentioned sticking-by-pressure tool to the rear-face side, it is not limited to this. For example, you may be the configuration which extends from the crosswise end side of the above-mentioned sticking-by-pressure tool to the feed direction of the above-mentioned anisotropy electric conduction layer, and parallel to an other end side side.

[0340] Position <DP N=0024> About piece of anisotropy electric conduction layer 4' supplied to the above-mentioned supply positions A and B in the one above-mentioned example the 7th, although the guide idlers 103 and 103 and the positioning device 127 of a couple were established in order to decide and carry out, what is necessary is just the configuration that it is not limited to this and only either is prepared crosswise.

[0341] It is good also considering the wiring terminal which it may not be limited to this, may be the mark of other configurations, and was prepared in the octavus at the above 1st and the 2nd liquid crystal glass substrate 2a and 2b although the + mark for a positioning 7 was considered as the mark of position doubling in the one above-mentioned example as a mark.

[0342] You may be the configuration which the above-mentioned cell stage 13 is not limited to this by it although only the piece is prepared in the 9th, and are prepared in it in the one above-mentioned example.

[0343] Moreover, you may be the configuration that two or more X-Y tables 29 and adsorption arms 31 are prepared on the above-mentioned X guide rail 28.

[0344] As for the substrate of the couple which constitutes the above-mentioned liquid crystal cell 2 in the 10th, glass-substrate 2a and 2b \*\*\*\*\* may not be limited to this, and one substrate may be a reflecting plate.

[0345] As a tool for sticking above-mentioned piece of anisotropy electric conduction layer 4' on

the 11th in the one above-mentioned example at the liquid crystal glass substrates 2a and 2b, although two tools, the insertion tool 119 and the sticking-by-pressure tool 122, were provided, you may be only the sticking-by-pressure tool 122.

[0346] You may be the configuration which it lets out the 12th in the length orientation of the above-mentioned sticking-by-pressure section 122a although the above-mentioned pad 132 was a configuration which it lets out crosswise [ of sticking-by-pressure section 122a of this sticking-by-pressure tool 122 ].

[0347] Although the 1st and the 2nd release paper 6a and 6b were stuck on the above-mentioned anisotropy electric conduction layer 4 in the one above-mentioned example the 13th at both adhesive faces, it may not be limited to this, and where 1st release-paper 6a is stuck only in one of the two's field, winding receipt may be carried out at the above-mentioned supply reel 35.

[0348] Moreover, the device for rolling round this 2nd release-paper 6b for the 2nd release-paper take-up reel 48 at first in this case is unnecessary.

[0349]

[Effect of the Invention] In the attachment equipment of the piece of an adhesive tape which manufactures the piece of an adhesive tape by the 1st means of this invention cutting the adhesive tape which has tackiness to both sides by the shape of a long picture in the shape of a strip of paper, and sticks this piece of an adhesive tape on a stuck member The stuck member \*\*\*\*ed from the stuck member feeder style which \*\*\*\*s the above-mentioned stuck member, and this stuck member feeder style is received. the adhered member hold device in which the site on which the above-mentioned piece of an adhesive tape of this stuck member is stuck is positioned in a predetermined attachment position, and the above -- a long picture, while an adhesive tape is contained this adhesive tape was stuck in one field of this adhesive tape -- the same -- a long picture -- with the delivery device which it lets out one by one for every predetermined dimension in the status that it held by the tape-like release paper The cutting-machine style which leaves the above-mentioned release paper, cuts the adhesive tape which it let out from this delivery device for every above-mentioned predetermined dimension, and fabricates the piece of an adhesive tape, The guide device in which show the piece of an adhesive tape held at the above-mentioned release paper to the predetermined attachment position in guiding the above-mentioned release paper, and the adhesive face of this piece of an adhesive tape is made to counter the front face of the above-mentioned stuck member, The attachment device which pushes the adhesive face of the piece of an adhesive tape and the front face of the above-mentioned stuck member which countered in the above-mentioned attachment position, and sticks this adhesive tape on the above-mentioned stuck member, By the sublation device in which the above-mentioned release paper is exfoliated from the piece of an adhesive tape stuck on the above-mentioned stuck member, and sending and driving the release paper which exfoliated for every predetermined dimension A delivery drive means to make the adhesive face of the new piece of an adhesive tape which was fabricated by the above-mentioned cutting-machine style and held at this release paper counter the front face of the stuck member positioned in the above-mentioned predetermined attachment position, It is characterized by providing an issue means to discharge the release paper which passed this delivery drive means one by one from the above-mentioned attachment position, and a taking-out means to transport this stuck member to a taking-out position based on the piece of an adhesive tape having been stuck on the above-mentioned stuck member.

[0350] According to such a configuration, the work which sticks the piece of an adhesive tape on a stuck member a long picture, since it is possible for it to be continuous and full automatic and to perform a release paper including the exfoliating work from the piece of an adhesive tape stuck on the work and above-mentioned stuck member which cuts an adhesive tape for every predetermined dimension, and forms the piece of an adhesive tape With a help or manual equipment, it is effective in the ability to raise the insertion precision of an adhesive tape and the productivity of a product which were a limitation.

[0351] The 2nd means is set to the attachment equipment of the piece of an adhesive tape of the



1st above-mentioned means. the above-mentioned stuck member The inversion device in which are the substrate of the couple which opposite arrangement was mutually carried out and was joined, and one substrate of the substrates of this couple is made to invert this liquid crystal cell based on the above-mentioned piece of an adhesive tape having been stuck is provided. It is characterized by sticking the above-mentioned piece of an adhesive tape on each of the field which counters mutually [ the substrate of the above-mentioned couple ].

[0352] the work which according to such a configuration the opposite side of the substrate of a couple is alike, respectively, and sticks the piece of an adhesive tape -- a long picture -- it is possible to carry out by being continuous and full automatic including the work which reverses the work which cuts an adhesive tape for every predetermined dimension, and forms the piece of an adhesive tape, the work which exfoliates a release paper from the piece of an adhesive tape stuck on the above-mentioned substrate, and the above-mentioned substrate

[0353] Therefore, with a help or manual equipment, it is effective in the ability to raise the productivity of the product which consists of a substrate of the couple which was a limitation, for example, the attachment precision of the piece of an adhesive tape to the liquid crystal cell of a simple matrix liquid crystal panel and a product, conventionally.

[0354] The 3rd means is set to the attachment equipment of the piece of an adhesive tape of the 1st means. the above-mentioned delivery device The reel which carries out the winding receipt of the release paper stuck on one [ an adhesive tape and / at least ] field of this adhesive tape, and this reel by carrying out a rotation drive While \*\*\*\*ing with the reel drive means which lets out the above-mentioned adhesive tape and a release paper, and the release paper stuck on one field of the above-mentioned adhesive tape The roller formed free [ a both-way move ] along the orientation which gives a tension to this release paper and an adhesive tape, An energization means to energize the above-mentioned roller in the orientation which gives a tension to the above-mentioned adhesive tape and a release paper, and to locate this roller in the 1st position, If the above-mentioned roller resists and moves to the energization force of the above-mentioned energization means according to a detection means to detect the position of the above-mentioned roller, and the above-mentioned adhesive tape and a release paper being sent and it is located in the 2nd predetermined position While the above-mentioned rotation drive means is operated according to the detecting signal from the above-mentioned detection means and it lets out an adhesive tape and a release paper from the above-mentioned reel If the above-mentioned roller returns to the 1st position of a basis by letting out an adhesive tape and a release paper, it will be characterized by having a control means to stop a drive of the above-mentioned rotation drive means based on the detecting signal from the above-mentioned detection means.

[0355] According to such a configuration, while an adhesive tape and a release paper can always be stretched by fixed tension, it is possible to let out this adhesive tape and release paper one by one, where the tension of the above-mentioned regularity is maintained.

[0356] Therefore, since it can send and drive, without making the above-mentioned adhesive tape produce slack, it is effective in the ability to raise the attachment precision of this adhesive tape.

[0357] It is characterized by the 4th means having the positioning guide which positions the piece of an adhesive tape which contacts the 1 side of the above-mentioned piece of an adhesive tape, and a release paper which meets crosswise at least, and was supplied to the above-mentioned attachment position, whenever the above-mentioned piece of an adhesive tape sends and drives the above-mentioned guide device for every predetermined dimension in the attachment equipment of the piece of an adhesive tape of the 1st means.

[0358] According to such a configuration, the piece of an adhesive tape stuck on a stuck member was able to be positioned, and can be made to counter to the above-mentioned stuck member.

[0359] Therefore, it is effective in the ability to raise the attachment precision of the above-mentioned piece of an adhesive tape.

[0360] It carries out that the 5th means is the guide idler which positions the piece of an adhesive tape supplied to the above-mentioned attachment position by having the strange guide slot where



a width-of-face dimension is good in a periphery side, and narrowing width of face of this guide slot while the above-mentioned positioning guide is arranged in a supply [ of the above-mentioned release paper which faced across the above-mentioned attachment position ], and winding side in the attachment equipment of the piece of an adhesive tape of the 4th means as the characteristic feature.

[0361] While this piece of an adhesive tape could be guided in the guide slot at the time of delivery of the piece of an adhesive tape, when delivery is stopped according to such a configuration, the above-mentioned piece of an adhesive tape and a release paper can be held in the above-mentioned guide slot, and the positioning hold of the piece of an adhesive tape supplied to the above-mentioned attachment position can be carried out to the above-mentioned substrate.

[0362] Therefore, it is effective in the ability to raise the attachment precision of the above-mentioned piece of an adhesive tape.

[0363] In the attachment equipment of the piece of an adhesive tape of the 4th means, the above-mentioned positioning guide is arranged in the above-mentioned attachment position, the 6th means is driven in the orientation which \*\*\*\*s the cross direction 1 side of the piece of an adhesive tape supplied to this attachment position, and it is characterized by being the contact field which rectifies the posture of this piece of an adhesive tape.

[0364] According to such a configuration, by making the piece of contact contact the cross direction 1 side of the above-mentioned adhesive tape, the posture of the piece of an adhesive tape located in an attachment position can be rectified, and this piece of an adhesive tape can be positioned to a substrate.

[0365] Therefore, it is effective in the ability to raise the attachment precision of the above-mentioned piece of an adhesive tape.

[0366] The 7th means is set to the attachment equipment of the piece of an adhesive tape of the 1st means. the above-mentioned attachment device By driving the mobile which holds the above-mentioned delivery device, a cutting-machine style, a guide device, a sublation device, and a delivery drive means, and moves in one with these, and the above-mentioned mobile It is characterized by providing a drive means to contact the adhesive face of the above-mentioned piece of an adhesive tape to the above-mentioned stuck member, and the tool which pushes this piece of an adhesive tape against the above-mentioned stuck member by contacting the field which was established in the above-mentioned mobile and stuck on the above-mentioned release paper of the above-mentioned piece of an adhesive tape.

[0367] While the adhesive face of the piece of an adhesive tape is contacted to a stuck member by moving the above-mentioned mobile according to such a configuration, the above-mentioned adhesive tape can be pushed against a stuck member by making a tool contact the field where the release paper of this piece of an adhesive tape was stuck.

[0368] Therefore, since the above-mentioned piece of an adhesive tape can be stuck on the above-mentioned stuck member, without sagging the above-mentioned piece of an adhesive tape, and a release paper, it is possible to raise the attachment precision of the above-mentioned piece of an adhesive tape.

[0369] The means of the octavus is set to the attachment equipment of the piece of an adhesive tape of the 1st means. the above-mentioned attachment device The tool for insertion with which it equips where it carried out the adsorption hold of the field where the above-mentioned release paper of the above-mentioned piece of an adhesive tape was stuck and the above-mentioned piece of an adhesive tape is positioned to the above-mentioned stuck member, The piece of an adhesive tape with which the above-mentioned stuck member was equipped by the above-mentioned tool for insertion is pushed against the above-mentioned stuck member through the above-mentioned release paper, and it is characterized by providing the sticking-by-pressure tool stuck to the above-mentioned stuck member by pressure.

[0370] According to such a configuration, after carrying out the positioning insertion of the adhesive tape at a stuck member using the tool for insertion, this adhesive tape can be stuck to a

stuck member by pressure using a sticking-by-pressure tool.

[0371] Therefore, since the piece of an adhesive tape which is easy to carry out a position gap can be stuck crosswise by pressure where positioning insertion is carried out with high precision beforehand, it is effective in the ability to raise the attachment precision of the above-mentioned piece of an adhesive tape.

[0372] The 9th means is set to the attachment equipment of the piece of an adhesive tape of the 1st means. the above-mentioned delivery drive means The clamp device which supports the site which exfoliated from the piece of an adhesive tape stuck on the stuck member of the above-mentioned release paper, and is moved to a feed direction, It is characterized by having the adsorption hold means which carries out the adsorption hold of the site holding the above-mentioned piece of an adhesive tape of the above-mentioned release paper when the above-mentioned release paper is not supported by the above-mentioned clamp device at least.

[0373] It is possible to send the above-mentioned adhesive tape a predetermined dimension every, and to drive it by making it move to a feed direction, supporting the above-mentioned release paper by an adsorption hold and clamp device of the above-mentioned release paper by the adsorption hold means by turns, and supporting the above-mentioned release paper according to this drawer device according to such a configuration.

[0374] Moreover, the midst which is performing the attachment operation of the above-mentioned piece of an adhesive tape can carry out the adsorption hold of the site which holds the piece of an adhesive tape stuck on the degree of the above-mentioned release paper at a stuck member by operating the above-mentioned adsorption hold means while it makes the above-mentioned clamp device the unclamping status.

[0375] It is possible to be able to prevent a position gap of the above-mentioned piece of an adhesive tape, and to perform highly precise attachment of this piece of an adhesive tape by this, since the elongation made into how to produce in the above-mentioned piece of an adhesive tape can be made to absorb to a release-paper side after exfoliating from this piece of an adhesive tape.

[0376] The 10th means is set to the attachment equipment of the piece of an adhesive tape of the 1st means. the above-mentioned recovery means The roller formed in this release paper free [ a both-way move ] along the orientation which gives a tension while \*\*\*\*ing with the release paper which passed the above-mentioned delivery drive means, An energization means to energize this roller in the orientation which gives a tension to the above-mentioned release paper, and to locate this roller in the 1st position, the reel which carries out the winding receipt of the above-mentioned release paper, and this reel by carrying out a rotation drive If the above-mentioned roller moves to this reel according to the energization force of the above-mentioned energization means according to the reel drive means which rolls round the above-mentioned release paper, and the above-mentioned release paper being sent and it is located in the 2nd predetermined position While the above-mentioned rotation drive means is operated according to the detecting signal from the above-mentioned detection means and a release paper is rolled round to the above-mentioned reel If the above-mentioned roller returns to the 1st position of a basis by rolling round the above-mentioned release paper, it will be characterized by providing a control means to stop a drive of the above-mentioned rotation drive means based on the detecting signal from the above-mentioned detection means.

[0377] According to such a configuration, while a fixed tension can always be given to the above-mentioned release paper, where this tension is maintained, it sends a predetermined dimension every, drives, and can discharge one by one from the above-mentioned attachment position.

[0378] Therefore, since it can prevent effectively that a deflection arises in the issue side of the above-mentioned release paper, it is rare for a position gap of the piece of an adhesive tape held by this release paper to arise, and it is possible to perform highly precise attachment of this piece of an adhesive tape.

[0379] The 11th means is set to the attachment equipment of the piece given in one of an

adhesive tape of the 1st means. the above-mentioned disconnection means While holding free [ titubation of the plinth side holding the field on which the release paper of the above-mentioned adhesive tape was stuck, and the end side which meets crosswise / of the above-mentioned adhesive tape of this plinth ] While it meets crosswise [ of the 1st direct-acting device which can move in the thickness orientation of the above-mentioned adhesive tape, and the above-mentioned adhesive tape of the above-mentioned plinth ], and also holding free [ titubation of one end ] The 2nd direct-acting device which can move in the thickness orientation of the above-mentioned adhesive tape, and the disconnection blade which counters the adhesive face of the adhesive tape held at the above-mentioned plinth, is arranged, and possesses the length more than the width of face of the above-mentioned adhesive tape at least, It is characterized by providing the actuator which drives this disconnection blade in the orientation of the adhesive tape held at the above-mentioned plinth, and a regulation means to regulate the feed per revolution of the above-mentioned disconnection blade by the above-mentioned actuator in the amount which can cut only the above-mentioned adhesive tape.

[0380] According to such a configuration, the inclination of the plinth holding an adhesive tape and the path clearance of this plinth and a disconnection blade can be adjusted, it can leave a release paper and the high precision disconnection of the above-mentioned adhesive tape can be carried out.

[0381] Therefore, it is effective in the ability to manufacture the piece of an adhesive tape certainly.

[0382] The 12th means is set to the attachment equipment of the piece of an adhesive tape of the 7th means. A pad, the supply roll which carries out the winding receipt of this pad, and supplies it one by one, and the winding roll which rolls round the pad supplied by this supply roll, It is prepared in the above-mentioned tool free [ attachment and detachment ], hold this supply roll and a winding roll, and the above-mentioned pad is stretched between the supply roll of a parenthesis, and a winding roll. When attached in the above-mentioned tool, it is characterized by providing the case where the pad by which set-up was carried out [ above-mentioned ] is located in the field which contacts the above-mentioned release paper of the above-mentioned press tool.

[0383] according to such a configuration -- a help -- a pad -- a one by one new thing -- changing -- it is unnecessary and a new pad can be supplied between the press side of the above-mentioned press tool, and a release paper one by one

[0384] Moreover, it is effective in the ability to perform easily exchanging the above-mentioned pad by carrying out the desorption of the case.

[0385] The 13th means is prepared in the above-mentioned tool side in the attachment equipment of the piece of an anisotropy electric conduction layer of the 12th means, and it is characterized by providing the drive which drives the above-mentioned winding roll in the rolling-up orientation of the above-mentioned pad at least.

[0386] According to such a configuration, it is possible to supply a new pad to the press side of the above-mentioned tool one by one by operating a drive intermittently.

[0387] Therefore, since it is not necessary to let out the above-mentioned pad with a help, the productivity of a product improves.

[0388]

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## Correction and a correction

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[Procedure correction 1]

[Document to be Amended] Specification

[Item(s) to be Amended] The name of invention

[Method of Amendment] Change

[Proposed Amendment]

[Title of the Invention] Attachment equipment of the piece of an adhesive tape, and the attachment technique of an adhesive tape

[Procedure correction 2]

[Document to be Amended] Specification

[Item(s) to be Amended] Claim

[Method of Amendment] Change

[Proposed Amendment]

[Claim(s)]

[Claim 1] In the attachment equipment of the piece of an adhesive tape which manufactures the piece of an adhesive tape by cutting the adhesive tape which has tackiness to both sides in the shape of a strip of paper, and sticks this piece of an adhesive tape on a stuck member  
The stuck member feeder style which \*\*\*\*s the above-mentioned stuck member,  
The adhered member hold device in which the site on which the stuck member \*\*\*\*ed from this stuck member feeder style is received, and the above-mentioned piece of an adhesive tape of this stuck member is stuck is positioned in a predetermined attachment position,  
The delivery device which it lets out one by one for every predetermined dimension in the status that it held by the release paper of the shape of a tape on which this adhesive tape was stuck by one adhesive face of this adhesive tape while the above-mentioned adhesive tape was contained,  
Cutting-machine style which cuts only the above-mentioned adhesive tape for every above-mentioned predetermined dimension among the adhesive tape which it let out from this delivery device, and a release paper, and fabricates the piece of an adhesive tape, Guide delivery drive which it shows [ drive ] the piece of an adhesive tape held at the above-mentioned release paper to the predetermined attachment position in guiding and sending and driving the above-mentioned release paper, and makes the adhesive face of another side of this piece of an adhesive

tape counter the attachment side of the above-mentioned stuck member,

The attachment device which pushes the adhesive face of another side of the piece of an adhesive tape and the attachment side of the above-mentioned stuck member which countered in the above-mentioned attachment position, and sticks this piece of an adhesive tape on the above-mentioned stuck member,

Attachment equipment of the piece of an adhesive tape characterized by providing the sublation device in which the above-mentioned release paper is exfoliated from the piece of an adhesive tape stuck on the above-mentioned stuck member.

[Claim 2] In the attachment equipment of the piece according to claim 1 of an adhesive tape It has the substrate of the couple which opposite arrangement of the above-mentioned stuck member of each other was carried out, and was joined.

The inversion device in which one substrate of the substrates of this couple is made to invert this liquid crystal cell based on the above-mentioned piece of an adhesive tape having been stuck is provided.

Attachment equipment of the piece of an adhesive tape characterized by sticking the above-mentioned piece of an adhesive tape on each of the attachment side which counters mutually [ the substrate of the above-mentioned couple ].

[Claim 3] In the attachment equipment of the piece according to claim 1 of an adhesive tape The above-mentioned delivery device,

The supply reel which carries out winding receipt with the release paper on which the adhesive tape was stuck by one [ at least ] adhesive face of this adhesive tape,

The reel drive means which lets out the above-mentioned adhesive tape and a release paper by carrying out the rotation drive of this reel,

Attachment equipment of the piece of an adhesive tape characterized by having a tension grant means to give a tension to the adhesive tape and release paper which it let out.

[Claim 4] In the attachment equipment of the piece according to claim 3 of an adhesive tape The above-mentioned tension grant means,

The roller which covers the 2nd position and was formed in the orientation which gives a tension to this release paper and an adhesive tape free [ a move ] from the 1st predetermined position while \*\*\*\*ing with the release paper stuck on one adhesive face of the above-mentioned adhesive tape,

An energization means to energize the above-mentioned roller in the orientation which gives a tension to the above-mentioned adhesive tape and a release paper, and to locate this roller in the 2nd position,

A detection means to detect the position of the above-mentioned roller,

Based on the detecting signal from this detection means, it has a control means to operate the above-mentioned reel drive means.

This control means,

While the above-mentioned reel drive means is operated according to the detecting signal from the above-mentioned detection means and it lets out an adhesive tape and a release paper from the above-mentioned reel based on the above-mentioned roller having resisted and moved to the energization force of the above-mentioned energization means according to the above-mentioned adhesive tape and a release paper being sent, and having been located in the 1st above-mentioned position

Attachment equipment of the piece of an adhesive tape characterized by stopping a drive of the above-mentioned reel drive means based on the detecting signal from the above-mentioned detection means based on the above-mentioned roller having returned to the 1st position of a basis by letting out an adhesive tape and a release paper.

[Claim 5] In the attachment equipment of the piece according to claim 1 of an adhesive tape The above-mentioned guide delivery drive means,

The adsorption hold means which is prepared in the upstream side of the above-mentioned predetermined attachment position, and carries out the adsorption hold of the above-mentioned

piece of an adhesive tape through the above-mentioned release paper,

A release paper after exfoliating from the piece of an adhesive tape stuck on the stuck member in the above-mentioned attachment position is clamped, and it has the clamp device in which this release paper is sent and driven in a predetermined dimension.

Attachment equipment of the piece of an adhesive tape characterized by operating the above-mentioned adsorption hold means based on canceling the adsorption hold by the above-mentioned adsorption hold means in case the above-mentioned release paper is sent and driven by the above-mentioned clamp device, and the above-mentioned piece of an adhesive tape having been positioned in the above-mentioned predetermined attachment position.

[Claim 6] In the attachment equipment of the piece according to claim 1 of an adhesive tape  
The above-mentioned guide delivery drive,

Attachment equipment of the piece of an adhesive tape characterized by having the positioning guide which positions the above-mentioned piece of an adhesive tape, and the piece of an adhesive tape of a release paper which contacts a cross direction 1 side at least, and was supplied to the above-mentioned attachment position whenever the above-mentioned piece of an adhesive tape sends and drives for every predetermined dimension.

[Claim 7] In the attachment equipment of the piece according to claim 6 of an adhesive tape  
The above-mentioned positioning guide,

Attachment equipment of the piece of an adhesive tape characterized by being the guide idler which positions the piece of an adhesive tape supplied to the above-mentioned attachment position by having the strange guide slot where a width-of-face dimension is good in a periphery side, and narrowing width of face of this guide slot while it is arranged in the position which faced across the above-mentioned attachment position, respectively.

[Claim 8] In the attachment equipment of the piece according to claim 6 of an adhesive tape  
The above-mentioned positioning guide,

Attachment equipment of the piece of an adhesive tape characterized by being the contact field which is arranged in the above-mentioned attachment position, drives in the orientation which \*\*\*\*s the cross direction 1 side of the piece of an adhesive tape supplied to this attachment position, and rectifies the posture of this piece of an adhesive tape.

[Claim 9] In the attachment equipment of the piece according to claim 1 of an adhesive tape  
The above-mentioned attachment device,

The mobile holding the above-mentioned delivery device, a cutting-machine style, a guide delivery drive, and a sublation device,

A drive means to contact the adhesive face of another side of the above-mentioned piece of an adhesive tape to the above-mentioned stuck member by driving the above-mentioned mobile,

The tool which pushes this piece of an adhesive tape against the above-mentioned stuck member by contacting the field which was established in the above-mentioned mobile and stuck on the above-mentioned release paper of the above-mentioned piece of an adhesive tape,

Attachment equipment of the piece of an adhesive tape characterized by \*\*\*\*\*ing.

[Claim 10] In the attachment equipment of the piece according to claim 1 of an adhesive tape  
The above-mentioned attachment device,

The tool for insertion with which it equips where it carried out the adsorption hold of the above-mentioned piece of an adhesive tape through the above-mentioned release paper and the above-mentioned piece of an adhesive tape is positioned to the above-mentioned stuck member,

Attachment equipment of the piece of an adhesive tape characterized by providing the tool for sticking by pressure which pushes against the above-mentioned stuck member the piece of an adhesive tape with which the above-mentioned stuck member was equipped by the above-mentioned tool for insertion through the above-mentioned release paper, and is stuck to the above-mentioned stuck member by pressure.

[Claim 11] In the attachment equipment of the piece according to claim 1 of an adhesive tape  
The above-mentioned disconnection means,

The plinth holding the field on which the release paper of the above-mentioned adhesive tape

was stuck,

While holding free [ titubation of the end side which meets crosswise / of the above-mentioned adhesive tape of this plinth ], it is the 1st direct-acting device which can move in the thickness orientation of the above-mentioned adhesive tape.

While it meets crosswise [ of the above-mentioned adhesive tape of the above-mentioned plinth ], and also holding free [ titubation of one end ], it is the 2nd direct-acting device which can move in the thickness orientation of the above-mentioned adhesive tape.

The disconnection blade which counters the adhesive face of another side of the adhesive tape held at the above-mentioned plinth, is arranged, and possesses the length more than the width of face of the above-mentioned adhesive tape at least,

The actuator which drives this disconnection blade in the orientation of the adhesive tape held at the above-mentioned plinth,

Attachment equipment of the piece of an adhesive tape characterized by providing a regulation means to regulate the feed per revolution of the above-mentioned disconnection blade by the above-mentioned actuator in the amount which can cut only the above-mentioned adhesive tape. [Claim 12] In the attachment equipment of the claim 9 or the piece given in ten of an adhesive tape

The attachment equipment of this piece of an adhesive tape has the pad feeder style which supplies a pad to the inferior surface of tongue of the above-mentioned tool further.

This pad feeder style,

The delivery roll which carries out the winding receipt of the pad and lets it out one by one,

The winding roll which rolls round the pad which it let out from this delivery roll one by one,

Attachment equipment of the piece of an adhesive tape carry out providing the case where the pad by which set-up was carried out [ above-mentioned ] is located in the field which contacts the above-mentioned release paper of the above-mentioned tool when it is prepared in the above-mentioned tool free [ attachment and detachment ], and this delivery roll and a winding roll are held, the above-mentioned pad is stretched between the delivery roll of a parenthesis, and a winding roll and it is attached in the above-mentioned tool as the characteristic feature.

[Claim 13] In the attachment equipment of the piece according to claim 12 of an adhesive tape

Attachment equipment of the piece of an adhesive tape characterized by providing the drive which is formed in the above-mentioned tool side and carries out the rotation drive of the above-mentioned winding roll at least in the orientation which rolls round the above-mentioned pad.

[Claim 14] In the attachment equipment of the piece according to claim 12 of an adhesive tape The above-mentioned supply roll,

Medial-axis member by which both ends are supported by the above-mentioned case and the above-mentioned pad is wound around a periphery side, This medial-axis member is prepared in an end free [ the slide to shaft orientations ] at least, and it prepares in orientation free [ \*\*\*\* ] outside the above-mentioned case from this medial-axis member, and is \*\*\*\*\*.

An energization means to energize this \*\*\*\*\* in \*\*\*\*\* or the orientation of rejection,

A regulation means to be prepared in this \*\*\*\*\* , to stop with the pad wound around the above-mentioned medial-axis member, and to regulate \*\*\*\* of the above-mentioned \*\*\*\*\* ,

Attachment equipment of the piece of an adhesive tape characterized by providing the sensor which detects that based on the above-mentioned \*\*\*\*\* having projected from the above-mentioned case, or having been absorbed by it being arranged in the position which counters the outside of the above-mentioned case, all the above-mentioned pads being delivered from the above-mentioned medial-axis member, and the stop status of this pad and a regulation means being canceled.

[Claim 15] In the attachment equipment of the piece according to claim 1 of an adhesive tape

The attachment equipment of this piece of an adhesive tape is the attachment equipment of the piece of an adhesive tape characterized by having a tension grant means to give a tension to a release paper after exfoliating from the above-mentioned piece of an adhesive tape.

[Claim 16] In the attachment equipment of the piece according to claim 15 of an adhesive tape

The above-mentioned tension grant means,

The roller which covers the 2nd position and was formed in the orientation which gives a tension to this release paper free [ a move ] from the 1st predetermined position while \*\*\*\*ing with the release paper,

An energization means to energize this roller in the orientation which gives a tension to the above-mentioned release paper, and to locate this roller in the 2nd position,

A detection means to detect the position of the above-mentioned roller,

The take-up reel which carries out the winding receipt of the above-mentioned release paper after passing the above-mentioned roller,

The reel drive means which rolls round the above-mentioned release paper to this take-up reel by carrying out the rotation drive of this reel,

Based on the detecting signal of the above-mentioned detection means, it has a control means to operate the above-mentioned reel drive means.

This control means,

It is based on the above-mentioned roller having moved according to the energization force of the above-mentioned energization means according to the above-mentioned release paper being sent, and having been located in the 1st above-mentioned predetermined position. While the above-mentioned reel drive means is operated according to the detecting signal from the above-mentioned detection means and a release paper is rolled round to the above-mentioned take-up reel Attachment equipment of the piece of an adhesive tape characterized by stopping a drive of the above-mentioned reel drive means based on the detecting signal from the above-mentioned detection means based on the above-mentioned roller having returned to the 2nd position of a basis by rolling round the above-mentioned release paper.

[Claim 17] In the attachment equipment of the piece according to claim 1 of an adhesive tape

The adhesion member which sticks with this piece of an adhesive tape by it being prepared in the position which counters the adhesive face of another side of the piece of an adhesive tape held at the release paper free [ this piece of an adhesive tape and \*\*\*\* ], and touching the adhesive face of another side of the above-mentioned piece of an adhesive tape,

Attachment equipment of the piece of an adhesive tape characterized by providing the drive which exfoliates and removes the unnecessary piece of an adhesive tape from the above-mentioned release paper by carrying out the \*\*\*\* drive of this adhesion member to the unnecessary piece of an adhesive tape.

[Claim 18] The adhered member hold device in which an adhered member is positioned, and the delivery device which lets out the release paper by which the adhesive tape was stuck on one field one by one, The cutting-machine style which leaves a release paper and cuts the adhesive tape which it let out in a predetermined dimension, It is the attachment technique of the adhesive tape using the adhesion equipment of the adhesive tape which has the attachment device which sticks the cut adhesive tape on an adhered member, the sublation device in which a release paper is exfoliated from the stuck adhesive tape, and a delivery drive means to send the release paper which exfoliated from the adhesive tape one by one.

The attachment technique of the adhesive tape characterized by positioning the adhesive tape cut based on the end-face position of the insertion section of the aforementioned attachment device, and sticking an adhesive tape on a stuck member according to the aforementioned attachment device after having left the release paper and cutting the adhesive tape which it let out from the delivery device in a predetermined dimension.

[Claim 19] The aforementioned adhesive tape is the attachment technique of the adhesive tape according to claim 18 characterized by positioning a feed direction in the place the cut edge of an adhesive tape and whose edge of the insertion section of the aforementioned attachment device corresponded mostly.

[Procedure correction 3]

[Document to be Amended] Specification

[Item(s) to be Amended] 0001



[Method of Amendment] Change

[Proposed Amendment]

[0001]

[Field of the Invention] This invention relates to the attachment equipment and the attachment technique of the piece of an adhesive tape which stick on the above-mentioned liquid crystal glass substrate the piece (piece of an adhesive tape) of an anisotropy electric conduction layer of double-sided tackiness which is connection material, in order to connect IC for a liquid crystal drive which are TAB parts to the liquid crystal glass substrate of the couple in which a liquid crystal cell carries out mutual opposite.

[Procedure correction 4]

[Document to be Amended] Specification

[Item(s) to be Amended] 0022

[Method of Amendment] Change

[Proposed Amendment]

[0022] It aims at offering the attachment equipment and the attachment technique of the piece of an adhesive tape that this invention was able to be accomplished in view of such a situation, and can perform disconnection of the adhesive tapes of double-sided tackiness, such as an anisotropy electric conduction layer, conveyance, attachment, etc. with the fitness and a sufficient precision, and these work can be performed automatically and continuously.

[Procedure correction 5]

[Document to be Amended] Specification

[Item(s) to be Amended] 0037

[Method of Amendment] Change

[Proposed Amendment]

[0037] It is characterized by the 15th means having a tension grant means to give a tension to a release paper after the attachment equipment of this piece of an adhesive tape exfoliated from the above-mentioned piece of an adhesive tape in the attachment equipment of the piece of an adhesive tape of the 1st means. The 16th means is set to the attachment equipment of the piece of an adhesive tape of the 15th means. the above-mentioned tension grant means The roller which covers the 2nd position and was formed in the orientation which gives a tension to this release paper free [ a move ] from the 1st predetermined position while \*\*\*\*ing with the release paper, An energization means to energize this roller in the orientation which gives a tension to the above-mentioned release paper, and to locate this roller in the 2nd position, A detection means to detect the position of the above-mentioned roller, the take-up reel which carries out the winding receipt of the above-mentioned release paper after passing the above-mentioned roller, and this reel by carrying out a rotation drive It has the reel drive means which rolls round the above-mentioned release paper to this take-up reel, and a control means to operate the above-mentioned reel drive means based on the detecting signal of the above-mentioned detection means. this control means It is based on the above-mentioned roller having moved according to the energization force of the above-mentioned energization means according to the above-mentioned release paper being sent, and having been located in the 1st above-mentioned predetermined position. While the above-mentioned reel drive means is operated according to the detecting signal from the above-mentioned detection means and a release paper is rolled round to the above-mentioned take-up reel Based on the above-mentioned roller having returned to the 2nd position of a basis, it is characterized by stopping a drive of the above-mentioned reel drive means based on the detecting signal from the above-mentioned detection means by rolling round the above-mentioned release paper. The 17th means is set to the attachment equipment of the piece of an adhesive tape of the 1st means. The adhesion member which sticks with this piece of an adhesive tape by it being prepared in the position which counters the adhesive face of another side of the piece of an adhesive tape held at the release paper free [ this piece of an adhesive tape and \*\*\*\* ], and touching the adhesive face of another side of the above-mentioned piece of an adhesive tape, It is characterized by providing the drive which exfoliates and removes the

unnecessary piece of an adhesive tape from the above-mentioned release paper by carrying out the \*\*\*\* drive of this adhesion member to the unnecessary piece of an adhesive tape. The adhered member hold device in which the 18th means positions an adhered member, The delivery device which lets out the release paper by which the adhesive tape was stuck on one field one by one, The cutting-machine style which leaves a release paper and cuts the adhesive tape which it let out in a predetermined dimension, The attachment device which sticks the cut adhesive tape on an adhered member, and the sublation device in which a release paper is exfoliated from the stuck adhesive tape, It is the attachment technique of the adhesive tape using the adhesion equipment of the adhesive tape which has a delivery drive means to send the release paper which exfoliated from the adhesive tape one by one. After leaving a release paper and cutting the adhesive tape which it let out from the delivery device in a predetermined dimension, The adhesive tape cut based on the end-face position of the insertion section of the aforementioned attachment device is positioned, and it is characterized by sticking an adhesive tape on a stuck member according to the aforementioned attachment device. The 19th means is characterized by positioning a feed direction in the place where the cut edge of an adhesive tape and the edge of the adhesive tape [ aforementioned ] of the insertion section of the aforementioned attachment device corresponded mostly in the attachment technique of the adhesive tape of the 18th means.

[Procedure correction 6]

[Document to be Amended] Specification

[Item(s) to be Amended] 0052

[Method of Amendment] Change

[Proposed Amendment]

[0052] According to the 17th means, before sending the piece of an adhesive tape to an attachment position, it exfoliates and the unnecessary piece of an adhesive tape held by the above-mentioned release paper can be removed from this release paper. Moreover, according to the 18th and 19th meanses, since it positions to the end face of the insertion section of an adhesion device based on a position, a feed direction can be positioned.

[Procedure correction 7]

[Document to be Amended] Specification

[Item(s) to be Amended] 0063

[Method of Amendment] Change

[Proposed Amendment]

[0063] Moreover, the liquid crystal cell 2 with which attachment of piece of anisotropy electric conduction layer 4' was able to be managed is received in the side of the piece attachment device 15 of an anisotropy electric conduction layer of the above 2nd from the above-mentioned cell stage 13, and the cell issue device 18 (taking-out means) which discharges this liquid crystal cell 2 is formed in it.

[Procedure correction 8]

[Document to be Amended] Specification

[Item(s) to be Amended] 0086

[Method of Amendment] Change

[Proposed Amendment]

[0086] As shown in drawing 2, after pulling out the above-mentioned anisotropy electric conduction layer 4 and the above 1st, and the 2nd release paper 6a and 6b from this supply reel 35, they are prepared in the upper part of the above-mentioned vertical move plate 34, and are wound around the 1st roller 37 (move roller) which \*\*\*\*s with release-paper 6a of the above 1st.

[Procedure correction 9]

[Document to be Amended] Specification

[Item(s) to be Amended] 0092

[Method of Amendment] Change

[Proposed Amendment]

[0092] Moreover, the 5th above-mentioned roller 43 is held as well as the 1st above-mentioned roller 37 possible [ a vertical move into the 2nd slit 50 prepared in the front face of the above-mentioned vertical move plate 34 ], and is energized downward (orientation which gives a tension to release-paper 6b of the above 2nd) by the 2nd weight shown in drawing by 51.

[Procedure correction 10]

[Document to be Amended] Specification

[Item(s) to be Amended] 0093

[Method of Amendment] Change

[Proposed Amendment]

[0093] And it is prepared in the upper-limit section and the soffit section of this 1st [ the ] and the 2nd slit 38 and 50 face to face, and the upper-limit section sensor 52 and the soffit section sensor 53 which detect the 1st above-mentioned roller 37 or the 5th roller 45 are arranged by the 1st in which the 1st above-mentioned roller 37 and this 5th roller 43 were formed, and the 2nd slit 38 and 50, respectively.

[Procedure correction 11]

[Document to be Amended] Specification

[Item(s) to be Amended] 0094

[Method of Amendment] Change

[Proposed Amendment]

[0094] These upper-limits section sensor 52 and the soffit section sensor 53 are connected to the control section shown in drawing by 54. the above-mentioned control section 54 Based on the detecting signal from these upper-limits section and the soffit section sensors 52 and 53, the above 1st and the 2nd drive motor 48 and 49 are controlled. A rolling-up operation of release-paper 6b of the above 2nd is performed to the above-mentioned supply reel 35 at a delivery operation of the above-mentioned anisotropy electric conduction layer 4, and the release-paper take-up reel 46 of the above 2nd.

[Procedure correction 12]

[Document to be Amended] Specification

[Item(s) to be Amended] 0122

[Method of Amendment] Change

[Proposed Amendment]

[0122] Thus, as shown in drawing 2, cut piece of anisotropy electric conduction layer 4' is in the status held at release-paper 6a of the above 1st, and is discharged from this cutting-machine style 54. (Status shown in drawing 3 (c))

1st release-paper 6a holding this piece of anisotropy electric conduction layer 4' is guided at an abbreviation horizontal direction with the above-mentioned roller for guidance 56 formed in this cutting-machine style 54 bottom, and is supplied to 1st anisotropy electric conduction layer attachment position A (only henceforth "attachment position A") in which the 1st above-mentioned backup 8 was formed.

[Procedure correction 13]

[Document to be Amended] Specification

[Item(s) to be Amended] 0131

[Method of Amendment] Change

[Proposed Amendment]

[0131] The mainframe 96 held free [ a vertical move ] in the vertical drive cylinder which shows this anisotropy electric conduction layer sublation equipment 94 in drawing 95, The file reel 98 which it lets out one by one while it is prepared in the lower part of this mainframe 96 and the winding hold of the adhesive tape 97 which makes a field an adhesive face is carried out, this file reel 98 and abbreviation -- it is prepared in the take-up reel 99 which is prepared in the same height and rolls round the above-mentioned adhesive tape 97, and the upper part of the above-mentioned mainframe 96, and consists of two set-up rollers 100,100 which stretch the above-mentioned adhesive tape 97 where the adhesive face is turned up

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## DESCRIPTION OF DRAWINGS

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### [Brief Description of the Drawings]

[Drawing 1] The whole block diagram showing one example of this invention.

[Drawing 2] Front view showing the 1st anisotropy electric conduction layer attachment device similarly.

[Drawing 3] Process drawing showing the manufacturing process of the piece of an anisotropy electric conduction layer similarly.

[Drawing 4] The plan and front view showing a cutting-machine style similarly.

[Drawing 5] The plan showing the specification-part material of a cutting-machine style similarly.

[Drawing 6] Process drawing showing the sublation process of the unnecessary piece of an anisotropy electric conduction layer similarly.

[Drawing 7] Drawing of longitudinal section showing an operation of a guide idler similarly.

[Drawing 8] The side elevation showing the anisotropy electric conduction layer attachment section similarly.

[Drawing 9] The side elevation showing an operation of the positioning device prepared in the insertion tool similarly.

[Drawing 10] The side elevation showing an operation of a sticking-by-pressure tool similarly.

[Drawing 11] The schematic diagram showing attachment and detachment of the pad feeder style to a sticking-by-pressure tool similarly.

[Drawing 12] The plan of the cassette field which similarly constitutes a pad feeder style.

[Drawing 13] Drawing of longitudinal section expanding and showing a detecting element similarly.

[Drawing 14] Drawing of longitudinal section expanding and showing a drive similarly.

[Drawing 15] Process drawing showing an anisotropy electric conduction layer and the 1st, and the delivery process of the 2nd release paper similarly.

[Drawing 16] The flowchart in which an operation of equipment is similarly shown.

[Drawing 17] The flowchart in which an operation of equipment is similarly shown.

[Drawing 18] Process drawing showing the posture of the liquid crystal cell under attachment operation similarly.

[Drawing 19] Process drawing showing an attachment operation similarly.

[Drawing 20] Process drawing showing an attachment operation similarly.

[Drawing 21] Process drawing showing an attachment operation similarly.

[Drawing 22] Process drawing showing an attachment operation similarly.

[Drawing 23] Process drawing showing an attachment operation similarly.

[Drawing 24] Drawing of longitudinal section showing other examples.

[Drawing 25] Drawing of longitudinal section showing other examples.

[Drawing 26] The perspective diagram showing a common liquid crystal panel.

[Drawing 27] The perspective diagram expanding and showing the piece of an anisotropy electric conduction layer stuck on the liquid crystal glass substrate.

[Drawing 28] The perspective diagram showing the anisotropy electric conduction layer with a release paper.

[Drawing 29] The plan showing the attachment site of the piece of an anisotropy electric conduction layer.

### [Description of Notations]

2 [ -- The 2nd liquid crystal glass substrate (stuck member), ] -- A liquid crystal cell, 2a -- The 1st liquid crystal glass substrate (stuck member), 2b 4 -- An anisotropy electric conduction layer (adhesive tape), 4' -- The piece of an anisotropy electric conduction layer (piece of an adhesive tape), 6a -- The 1st release paper (release paper), 11 -- Liquid crystal cell feed zone (stuck member feeder style), A -- The 1st anisotropy electric conduction layer attachment position

(attachment position), B -- The 2nd anisotropy electric conduction layer attachment position (attachment position), 13 -- A cell stage (stuck member hold device), 14 -- The 1st anisotropy electric conduction layer attachment device (attachment device), 15 -- The 2nd anisotropy electric conduction layer attachment device (attachment device), 18 -- Cell issue means (taking-out means), 34 [ -- Vertical drive cylinder (drive means of a mobile), ] -- A vertical move plate (mobile), 35 -- A supply reel, 36a 37 -- The 1st roller (move roller), 39 -- The 1st weight (energization means), 49 -- The 1st drive motor (reel drive means), 47 -- Control section (control means), 52 -- A upper-limit section sensor (detection means), 53 -- Soffit section sensor (detection means), 54 [ -- The 2nd slide member (2nd direct-acting device), ] -- A cutting-machine style, 63 -- The 1st slide member (1st direct-acting device), 64 71 [ -- Disconnection blade, ] -- A plinth, 82 -- A drive cylinder (actuator), 87 88 [ -- Clamp device (delivery drive means), ] -- Specification-part material (regulation means), 89 -- Specification-part material (regulation means), 90 91 -- A clamp device (delivery drive means), 94 -- Piece sublation device of an anisotropy electric conduction layer, 103 -- guide idler (a guide device, positioning guide) and 119 -- insertion tool (a tool --) the tool for insertion, 122 -- sticking-by-pressure tool (a tool, tool for insertion), and 127 -- positioning device (a guide device --) A positioning guide, 129 -- The contact field (positioning guide), 132 -- Pad, 133 -- A pad feeder style, 137a -- Winding side medial-axis member (winding roll), 136 [ -- An insertion member (\*\*\*\*\*), 142a / -- A height (regulation means), 143 / -- Spring 145 (energization means) / -- A proximity sensor (sensor), 147 / -- Drive. ] -- A case, 137b -- A delivery side medial-axis member (delivery roll), 142

